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entitled
Perceptions of Elementary School Children's Parents Regarding Sexuality Education
by
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Submitted to the Graduate Faculty as partial fulfillment of the requirements for the
Doctor of Philosophy in Health Education

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The purpose of this study was to examine the preferences of parents of elementary school aged children regarding when sexual health education topics identified by the National Sexuality Education Standards and the National Health Education Standards should be taught in school. More specifically, a focal point of this scientific inquiry was to determine if parents of elementary school aged children agree with the new National Sexuality Education Standards that are recommended in the K-5th grade level. Other factors that were examined included: benefits and barriers of teaching sexual health in schools as well as who should make the final decision on what sexual health topics are taught in schools.

A developed questionnaire was mailed to a random sample of 800 parents who have elementary school aged children (5-12 years old) across the United States. Of those 800, 630 met the requirement of having an elementary aged child. One hundred and fifty three surveys were returned over a 3-wave mailing process, for a response rate of 24% (153/630).

Of the parents who responded to the demographic questions, just over half were female (58%), the majority were white (86%), their child attended public school (82%),

and lived with both birth parents (78%). A majority (92%) of the parents surveyed believed that age-appropriate sex education should be taught in schools. Of those that responded yes to age appropriate sexuality education, 48% of parents believed sex education should begin being taught in 6-8th grade followed by 42% that believed it should be taught in k-5th grade. The majority (57-90%) of parents were supportive of six of the thirteen content topics being taught in elementary school. Those six topics included: bullying prevention (90%), friendship (86%), healthy relationships (75%), proper names for body parts (64%), different kinds of families (58%), and sexual abuse prevention (57%). The top two barriers to teaching sex education in elementary school cited by the parents was that parents did not want it taught in schools (80%) and that teachers are not at ease teaching it (48%). An ANOVA analysis showed that there was a significant difference based on perceived number of barriers and the type of school their child attended (public, private, home school). Additional ANOVA analyses revealed that there were significant differences between the number of benefits perceived and several demographic variables such as parent gender, political party affiliation, type of school the child attended, and the amount of time the child spent attending faith based services.

The results from this study indicated that these parents are in support of sexual health education being implemented in the schools. Assessing parents' thoughts and beliefs may increase the likelihood of providing developmentally appropriate sexual health education in elementary schools.

Dedicated to my husband, Kurt Fisher whose love, support, and encouragement have made this a journey I will never forget. I would also like to dedicate this to my mentor and good friend Dr. Kathy Hillman, without her support and encouragement I would not be where I am today. Thank You!

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List of Abbreviations

BSSS.....	Brief Sensation Seeking Scale
CDC.....	Centers for Disease Control and Prevention
HBM.....	Health Belief Model
HECAT	Health Education Curriculum Analysis Tool
HIV	Human Immunodeficiency Virus
K.....	Kindergarten
NHES	National Health Education Standards
NSES.....	National Sexuality Education Standards
STI.....	Sexually Transmitted Infections
YRBS	Youth Risk Behavior Survey

Chapter One

Introduction

This chapter introduces the study topic, the purpose of this research, and a review of the issues regarding sexual health education. The sections within this chapter include the following: Prevalence of Youth Sexual Risk Behaviors, Consequences of Engaging in Sexual Behaviors, Healthy People 2020, Abstinence-Only vs. Abstinence-Plus Sex Education, National Sexuality Education Standards, Statement of the Problem, Purpose of the Study, Definitions of Terms, Research Questions and Hypotheses. There are also noted Delimitations and Limitations of this research study.

Prevalence of Youth Sexual Risk Behaviors

In the United States sexual risk behaviors among young people are a major public health concern. In order to better understand the scope of the problem it is important to recognize the behaviors in which young people are engaging. According to the national Youth Risk Behavior Survey (YRBS), in 1991 54.2% of high school students have had sexual intercourse, however that rate decreased to 46.8% in 2013 (Centers for Disease Control and Prevention, 2014). Students who have had sexual intercourse for the first time before the age of 13 has also decreased from 10.2% in 1991 to 5.6% in 2013 (Centers for Disease Control and Prevention, 2014). Although the rates have decreased in the percentage of students who are sexually active, students need the knowledge and skills to protect themselves when engaging in sexual behaviors. Indeed, a recent national study found that older teens (18-19 years) knew little or nothing about condoms (41%) and birth control pills (75%) (Guttmacher Institute, 2012). Another national survey of

high school students found similar results. Among teens who were sexually active, 41% did not use a condom during the last time they had sexual intercourse, and 81% did not use birth control pills (Centers for Disease Control and Prevention, 2014). While 31% of teenagers 15-19 years old reported using some method of contraceptive, 1 in 5 (18%) women who are at risk of an unintended pregnancy were not using contraception (Jones, Mosher, & Daniels, 2012). Another alarming issue related to sexual risk taking behaviors is that 15% of the high school students reported having had sexual intercourse with four or more people in their life. Teenagers, who do not know about contraceptives, do not use contraceptives, and those who have multiple sex partners increase their risk of unintended pregnancy and contracting sexually transmitted infections (STI) when they engage in these high risk behaviors. This is why it is important to get young people the knowledge and skills to protect themselves before they become sexually active. Therefore, this study will focus on content and skills parents believe their elementary child should be learning in regards to sexuality education at school and at home.

Consequences of Engaging in Sexual Behaviors

The consequences of engaging in unprotected sexual behaviors for adolescents are profound. Two of the more obvious issues include the risk of getting a sexually transmitted infection (STI) and pregnancy. Teen rates of STI's are extremely high in the United States as compared to other countries (Guttmacher Institute, 2012). There are approximately 9.1 million new STIs each year among people ages 15-24 in the United States (Weinstock, Berman, & Cates, 2004) which means that one in four sexually active teens contract a STI each year. Although abstaining from sexual behaviors is the primary

means to eliminate the threat of STIs and Human Immunodeficiency Virus (HIV) infections, many teens nonetheless choose to engage in sexual behaviors. As such, it is important that they are aware of the variety of contraceptives they could use to protect themselves from the potentially negative consequences of sexual activity.

Another possible outcome of engaging in sexual behaviors is teen pregnancy. There are approximately 615,000 teen pregnancies that occur each year in the United States (Kost & Henshaw, 2014), and the majority (77%) of those are unintended (Mosher, Jones, & Abma 2012). More than a quarter (25%) of those pregnancies end in abortion and just over half (59%) of those pregnancies result in live births (Guttmacher Institute, 2012). The costs and consequences of an unintended teenage pregnancy impact the individual, friends, family, the public, and the child. The national cost associated with unintended teenage pregnancies was approximately \$10.9 billion in 2008 (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2013). Often facing little support, teenage mothers often drop out of high school, are less likely to attend college, and are more likely to live in poverty (Kirby, 2007). Teen mothers earn about \$3,500 less per year and receive nearly twice as much federal aid as older mothers (Finer & Henshaw, 2006).

Additional risks for the mother include poor psychological well-being (mental health), negative attitudes toward parenting (burdensome), and low relationship quality (Logan, Holcombe, Manlove, & Ryan, 2007). The prognosis for their children might be even more bleak: children born to teen mothers have lower cognitive development, less education, more behavioral problems, higher rates of incarceration, and are more likely to become teenage parents themselves (Kirby, 2007), potentially creating a vicious cycle of

poverty and delinquency. Although these statistics might seem alarming, both the overall pregnancy rate and the number of live births have declined steadily over the past ten years (Figure 1). Nonetheless, the consequences of engaging in unpredicted sexual behaviors many greatly impact the health and future wellbeing of teens, emphasizing the need to intervene early with sexuality education.

Healthy People 2020

Healthy People is a 10 year plan to improve the health of all Americans. This plan has been modified over the past three decades to address health concerns in the United States. There are 43 topic areas and hundreds of objectives designed to meet the goals of the topic areas of *Healthy People 2020*. One topic area that impacts teenage pregnancies is family planning. Family planning includes sexuality education as well as access to family planning services to improve health outcomes. The authors of *Healthy People 2020* recognize the importance of family planning by making this one of its top priorities. The main goal in *Healthy People 2020* related to family planning is to “improve pregnancy planning and spacing and prevent unintended pregnancy” (HealthyPeople.gov, 2013b, p. 1). The specific objective related to this goal includes, reducing pregnancies among adolescent females specifically among 15-17 year olds from 40.2 to 36.2 per 100,000 and for 18-19 year olds from 117.7 to 105.9 per 100,000 (HealthyPeople.gov, 2013c). Figure 2 lists additional *Healthy People 2020* family planning objectives that impact teen pregnancy and disease prevention. These objectives provide guidance on what programs should include to help decrease unintentional teen pregnancies nationwide.

Figure 1. Birth Rates (Live Births) per 1,000 Females Aged 15-19 Years, by Race and Hispanic Ethnicity, 2000-2011. Source: Centers for Disease Control and Prevention, (2013).

FP-8	Reduce pregnancies among adolescent females
FP-9	Increase the proportion of adolescents aged 17 years and under who have never had sexual intercourse.
FP-10	Increase the proportion of sexually active persons aged 15 to 19 years who use condoms to both effectively prevent pregnancy and provide barrier protection against disease.
FP-11	Increase the proportion of sexually active persons aged 15 to 19 years who use condoms and hormonal or intrauterine contraception to both effectively prevent pregnancy and provide barrier protection against disease.
FP-12	Increase the proportion of adolescents who received formal instruction on reproductive health topics before they were 18 years old.
FP-13	Increase the proportion of adolescents who talked to a parent or guardian about reproductive health topics before they were 18 years old

Figure 2. Healthy People 2020- Family Planning (FP) Objectives. Source: Healthy People, (2013b).

Abstinence-Only vs. Abstinence-Plus Sexuality Education

There have been many debates about which type of sex education should be taught in schools. Traditionally the debate concerning sex education in schools has been regarding teaching abstinence-only or abstinence-plus sex education. Abstinence-only is defined as traditionally emphasizing abstinence until marriage as the only means of avoiding STIs and unintended pregnancy (Bleakley A, 2006). Abstinence-plus, which is also referred to as comprehensive sex education, is defined as promoting abstinence as the safest choice but also providing complete, accurate, positive and developmentally appropriate information on human sexuality, including the risk reduction strategies of abstinence, contraception and STI protection and it promotes relevant personal and interpersonal skills (National Guidelines Task Forces, 2004).

The federal government has, in past years, funded abstinence-only programs even though there has been very limited research to imply that these programs are effective in reducing teen pregnancies and STIs. A review of abstinence and comprehensive programs by Douglas B. Kirby found that abstinence-only programs did not delay initiation of sex, but two-thirds of comprehensive programs showed a delay in initiating sex and an increase in condom and contraceptive use (2008). Other research has been conducted to show the effect of these types of programs. A national study of teenagers ages 15-19 who participated in abstinence-only classes found it did not reduce the likelihood of those teens from engaging in sex, however those students who participated in comprehensive classes were associated with lower likelihood of reporting engaging in sex (Kohler, Manhart, & Lafferty, 2008). While the research that has been conducted on

these abstinence-only programs has shown not to be effective, research on abstinence-plus programs has revealed some promising results.

Another national study on sex education found that having abstinence-plus sex education was associated with postponing sex until age 15 for both males and females (Muller, Gavin, & Kulkarni, 2008). This study indicated that females were more likely to report using birth control. In summary, research has shown that having comprehensive sexuality education has had positive effects on getting teens to postpone sexual initiation if not already sexually active and if sexually active, comprehensive programs have been found to increase contraceptive use among teens (Kirby, 2008; Kohler, et al., 2008; Muller, et al., 2008).

There are limited studies that have addressed sexuality education at the elementary school level. Under half (41.2%) of all school districts surveyed in the School Health Policies and Practice Study (SHPPS) in 2012 had specified time requirements for health education at the elementary schools level (Center for Disease Control and Prevention, 2013). Only half of elementary schools have health education which encompasses multiple health topics that teachers could teach. Sexual health is just one of many health education topics. The percentages of elementary schools that have adopted a policy to teach sexual health education topics including the following: HIV prevention (40.1%), human sexuality (52.4%), infectious diseases prevention (70.5%), other STD prevention (29.1%), and pregnancy prevention (26%)(Center for Disease Control and Prevention, 2013).

How prepared do elementary teachers feel to teach these sensitive topics with their elementary school aged children? A national study of 5th and 6th grade elementary

teachers found that 43% of the teachers surveyed currently taught sexuality education but that only 34% of those teachers had formal training in sexuality education (Price, Kirchofer, Telljohann, & Dake, 2003). A major concern is that most elementary teachers had no formal training to teach sexual health topics. It is important that teachers are properly trained to provide age and developmentally appropriate sexual health education to their students. According to the SHIPPS study 84.3% of states and 47.4% of districts have provided funding for professional development for the health topic of human sexuality (Center for Disease Control and Prevention, 2013). While some schools do teach human sexuality it is unclear about what and when to teach certain sexual health topics. Recently the Nation Sexuality Education Standards were created to help address those concerns.

National Sexuality Education Standards

In 2011, the Future of Sex Education (FoSE), developed the National Sexuality Education Standards: Core Content and Skills (Future of Sex Education Initiative, 2012). These are national standards (see Appendix A) that focus on seven sexual health topics, including anatomy and physiology, puberty and adolescent development, identity, pregnancy and reproduction, sexually transmitted diseases and HIV, healthy relationships, and personal safety (Future of Sex Education Initiative, 2012). These standards provide a framework for the essential minimum content and skills related to sexual health that are age and developmentally appropriate for students to learn in kindergarten through twelfth grade (Future of Sex Education Initiative, 2012).

Puberty plays an important role in when sexual health education topics should be covered. The timing of puberty varies; it typically occurs for girls between the ages of 9-16 and between the ages of 13 and 15 for boys (Venes, 2013). However, a study found that puberty onset is occurring at 9 to 10 years of age for some boys (Herman-Giddens et al., 2012). This study found that puberty onset is occurring at earlier ages for boys. It is necessary to get sexual health information to children prior to puberty and before they become sexually active, so that they better understand what is happening to their bodies and how to protect themselves should they chose to become sexually active. The new National Sex Education Standards (Future of Sex Education Initiative, 2012) recommend teaching students about age appropriate sexual health topics as early as Kindergarten. The aim of the current investigation is to collect feedback from parents who have elementary school aged children regarding the teaching of sexuality education. Such information will help provide school health educators with more insight as to how parents support for what sexual health topics should or should not be covered in school.

Statement of the Problem

The federal government continued to fund abstinence-only programs during the early millennium that have not been shown to be effective (Kirby, 2008). As children enter puberty, it is essential to provide them with age and developmentally appropriate comprehensive sexuality education. Children need information about sexuality to know what is happening to them during puberty as well as how to protect themselves should they choose to engage in sexual behaviors. While the main debate and focus has been on abstinence only versus abstinence-plus curricula, there are still many important sexual

health topics about which children and teens should be learning. The National Sexuality Education Standards (NSES) provides an outline of the minimum sexual health topics that should be covered in kindergarten through high school. There has not been any published research to evaluate if those standards are accepted by parents, more specifically parents of elementary aged children.

Purpose of the Study

The purpose of this study is to examine the preferences of parents of elementary school aged children regarding when schools should begin teaching a variety of sexuality education topics identified by the National Sexuality Education Standards and when parents plan to discuss these topics with their elementary aged child. More specifically, a focal point of this scientific inquiry is to determine if parents of elementary school aged children agree with the new National Sexuality Education Standards that are recommended in the K-5th grade level.

Research Questions and Hypotheses

The following research questions and hypotheses are addressed in this study.

Research Question 1: What grade do parents/caregivers of elementary school children think selected sexual health education topics should begin being taught at school?

Hypotheses 1.1: All of the parents/caregivers of elementary school children will perceive that sexual health education topics should begin being taught in the K-5th grades.

Research Question 2: Do parents/caregivers with high sensation seeking children believe sexual health topics should be taught earlier than parents/caregivers with low/moderate sensation seeking children?

Hypothesis 2.1: There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think proper names for body parts should begin being taught at school.

Hypothesis 2.2 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think the male and female reproductive system should begin being taught at school.

Hypothesis 2.3 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think gender roles should begin being taught at school.

Hypothesis 2.4 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think sexual orientation should begin being taught at school.

Hypothesis 2.5 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think reproduction should begin being taught at school.

Hypothesis 2.6 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children regarding when puberty should begin being taught at school.

Hypothesis 2.7 -There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think different kinds of families should begin being taught at school.

Hypothesis 2.8 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think characteristics of a friend should begin being taught at school based.

Hypothesis 2.9 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think characteristics of healthy relationships should begin being taught at school.

Hypothesis 2.10 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think bullying prevention should begin being taught at school.

Hypothesis 2.11 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think sexual abuse prevention should begin being taught at school.

Hypothesis 2.12 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think HIV prevention should begin being taught at school.

Hypothesis 2.13 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think pregnancy prevention should begin being taught at school.

Research Question 3: What grade do parents/caregivers of elementary school children believe select skills (analyzing influences, accessing information, interpersonal communication, self-management, and advocacy) should be taught in school?

Hypotheses 3.1: All of the parents/caregivers of elementary school children will perceive that sexuality education skills should begin being taught in K-5th grades.

Research Question 4: What are the differences in number of perceived barriers by demographics regarding teaching sexual health education in elementary school?

Hypothesis 4.1: There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the parent's/caregiver's gender.

Hypothesis 4.2 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on household income.

Hypothesis 4.3 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the education level of the parent/caregiver.

Hypothesis 4.4 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on his/her race/ethnicity.

Hypothesis 4.5 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on political party affiliation.

Hypothesis 4.6 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on religious affiliation.

Hypothesis 4.7- There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on family structure.

Hypothesis 4.8 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on type of school their child attends.

Hypothesis 4.9 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on geographic location.

Hypothesis 4.10 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the age of the parent/caregiver.

Hypothesis 4.11 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on how often their child attends faith based services.

Hypothesis 4.12 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on if they have older children (middle/high school).

Hypothesis 4.13 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on if their child is a high sensation seeker vs. a low/moderate sensation seeker.

Research Question 5: What are the differences in number of perceived benefits by demographics to teaching sexual health in elementary schools?

Hypothesis 5.1: There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on the parent's/caregiver's gender.

Hypothesis 5.2 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on household income.

Hypothesis 5.3 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on the parent's /caregiver's race/ethnicity.

Hypothesis 5.4 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on the education level.

Hypothesis 5.5 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on political party affiliation.

Hypothesis 5.6 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on religious affiliation.

Hypothesis 5.7 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on family structure.

Hypothesis 5.8 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on type of school their child attends.

Hypothesis 5.9 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on geographic location.

Hypothesis 5.10 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on the age of the parent/caregiver.

Hypothesis 5.11 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on how often their child attends faith based services.

Hypothesis 5.12 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children based on if they have older children (middle/high school).

Hypothesis 5.13 - There is no statistically significant difference in the number of perceived benefits between parents/caregivers of elementary school children

based on if their child is a high sensation seeker versus a low/moderate sensation seeker.

Research Question 6: Who should make the final decision on what sexual health topics are taught in public schools?

Hypotheses 6.1: All the parents/caregivers of elementary school children will perceive that parents should be the ones who should decide what sexual health education topics are taught.

Research Question 7: What sexual health topics do parents/caregivers of elementary school children discuss with their child and when do they think they will teach the various sexual health topics?

Hypotheses 7.1: All of the parents/caregivers of elementary school children will perceive that all of the sexual health topics will be discussed with their elementary child.

Hypotheses 7.2: All of the parents/caregivers of elementary school children will perceive that sexual health topics should begin being discussed when their child is in K-5th grades.

Research Question 8: Does parent sex influence how well parents think they have communicated with their child about sexuality issues?

Hypotheses 8.1: There is no significant difference between mothers and fathers regarding how well they have communicated with their child.

Research Question 9: Do mothers believe sexual health topics should be taught earlier than fathers?

Hypothesis 9.1: There is no statistically significant difference between parent sex and when they think proper names for body parts should begin being taught at school.

Hypothesis 9.2 - There is no statistically significant difference between parent sex and when they think the male and female reproductive system should begin being taught at school.

Hypothesis 9.3 - There is no statistically significant difference between parent sex and when they think gender roles should begin being taught at school.

Hypothesis 9.4 - There is no statistically significant difference between parent sex and when they think sexual orientation should begin being taught at school.

Hypothesis 9.5 - There is no statistically significant difference between parent sex and when they think reproduction should begin being taught at school.

Hypothesis 9.6 - There is no statistically significant difference between parent sex and when puberty should begin being taught at school.

Hypothesis 9.7 - There is no statistically significant difference between parent sex and when they think different kinds of families should begin being taught at school.

Hypothesis 9.8 - There is no statistically significant difference between parent sex and when they think characteristics of a friend should begin being taught at school based.

Hypothesis 9.9 - There is no statistically significant difference between parent sex and when they think characteristics of healthy relationships should begin being taught at school.

Hypothesis 9.10 - There is no statistically significant difference between parent sex and when they think bullying prevention should begin being taught at school.

Hypothesis 9.11 - There is no statistically significant difference between parent sex and when they think sexual abuse prevention should begin being taught at school.

Hypothesis 9.12 - There is no statistically significant difference between parent sex and when they think HIV prevention should begin being taught at school.

Hypothesis 9.13 - There is no statistically significant difference between parent sex and when they think pregnancy prevention should begin being taught at school.

Research Question 10: Do parents perceptions of how many sexuality topics should be taught in elementary school differ by select demographic/background variables?

Hypothesis 10.1: All of the listed independent variables will predict a significant amount of the variance of parent's support for teaching a high number (7-13) of sexuality education topics in school.

- Parent sex

- Sensation seeking child
- If they have an older child
- If they support a high (7-13) number of sexuality topics taught at home.

Definitions of Terms

The following terms are used throughout this study and are defined as follows:

Abstinence -only: Is the promotion of abstinence until marriage with no information on contraceptives (Santelli, 2008).

Abstinence-plus: Is the promotion of abstinence as the safest choice with information on contraceptive use (Santelli, 2008) .

Barrier: Things that are impediments to undertaking a recommended action (Strecher & Rosenstock, 1997).

Benefits: Beliefs regarding the outcome of taking a recommended action (Strecher & Rosenstock, 1997) .

Comprehensive sexuality education: It provides complete, accurate, positive and developmentally appropriate information on human sexuality, including the risk reduction strategies of abstinence, contraception and STI protection; it promotes the development of relevant personal and interpersonal skills; and it includes parents or caretakers as partners with teachers (National Guidelines Task Forces, 2004).

Elementary school child: In this study elementary school children are defined as those who are enrolled in Kindergarten through fifth grade.

Grade school: In this study grade school is another term used to describe elementary school which represents students who are enrolled in Kindergarten through fifth grade.

Health Belief Model: This is a psychological model that attempts to explain and predict health behaviors by focusing on attitudes and beliefs of individuals (Glanz, Rimer, & Viswanath, 2008).

Healthy People 2020: This is a science-based, 10 year national plan to improve the health of all Americans that has identified specific health improvement priorities (HealthyPeople.gov, 2013a).

Majority: A number larger than half the total (Dictionary.Com., 2013a).

National Health Education Standards: This is a framework developed to promote and support health enhancing behaviors through standards and performance indicators that identify what students should know and be able to do from pre-kindergarten through grade 12 (Joint Committee on National Health Education Standards, 2007).

National Sexuality Education Standards: Similar to the National Health Education Standards, the goal of these standards is ~~to~~ provide clear, consistent and straightforward guidance on the essential minimum, core content for sexuality education that is age-appropriate for students in grades K-12” (Future of Sex Education Initiative, 2012)

Parent: A father or a mother; a protector or guardian (Dictionary.Com., 2013b)

Plurality: Is defined as —a number of votes that is more than the number of votes for any other candidate or party but that is not more than half of the total number of votes”

Puberty: "the stage in life at which members of both sexes become functionally capable of reproduction" (Merriam-Webster, 2014; Venes, 2013)

Sensation Seeking: Is defined as —the need for varied, novel and complex sensations and experiences, and the willingness to take physical and social risks for the sake of such experiences” (Zuckerman, 1979)

Delimitations

This study is delimited to parents/caregivers who have elementary age children. Therefore, the beliefs obtained in the current study cannot be viewed as representative of the general public. Second, this study only examines parents of elementary aged children within the United States. As a result the findings cannot be generalized to parents of elementary aged children outside of the United States. Third, this study included a random sample of the United States as a whole. As a result the findings cannot be generalized to specific geographic regions (North, Midwest, West, and South) due to inadequate sample size. Finally, this study examines select sexual health topics from the National Sex Education Standards, therefore no conclusions can be made regarding other sexuality education topics that are not on the list used in this study.

Limitations

This study includes several limitations that may impact both the threats to internal and external validity of the findings. First, a cross-sectional design was used for this research project which means that no conclusions can be drawn regarding cause and effects. Second, this study relied on self-report responses on the questionnaire which can limit the internal validity of the research findings. The participant may not provide an accurate response if they are unsure of an item on the questionnaire or they might answer a question differently than what they truly believe due to social pressures. Third, this study examined when selected sexual health topics should begin to be discussed/taught and did not evaluate the quantity or quality of those conversations. Fourth, due to the limited response rate, the findings may lack external validity. Fifth, this study used the BSSS-4 items in a unique way. Parents filled out the BSSS-4 survey items according to how they think their child would describe themselves. Finally, this study resulted in possible homogeneity of the responses due to the responses being a group that was in greater favor of teacher sexuality education concepts.

Chapter Two

Review of Literature

This chapter discusses the literature that exists around the following topics: Parent Studies Regarding Sexuality Education in Schools, National Health Education Standards (NHES), National Sexuality Education Standards (NSES), Parent's Attitudes Regarding Discussing Topics with their Child, Sensation Seeking and High Risk Behaviors, and the Health Belief Model (HBM).

Parent Studies Regarding Sexuality Education in Schools

There have been nine published studies that surveyed parents in the United States regarding sexual health education being taught in schools (Figure 3). These studies were conducted with parents who had children in middle and high school (7th-12th grade) or they were conducted with parents who had a child under the age of 18 (K-12th grade). The majority (88%) of these studies were conducted by telephone interviews (Constantine, Jerman, & Huang, 2007; Eisenberg, Bernat, Bearinger, & Resnick, 2008; Ito et al., 2006; Kaiser Family Foundation, 2000; Lagus, Bernat, Bearinger, Resnick, & Eisenberg, 2011; Tortolero SR.; Johnson K; Peskin M, 2011) and three studies were conducted by using a mailed paper instrument (Barr, Moore, Johnson, Forrest, & Jordan, 2014; Dake, Price, Baksoovich, & Wielinski, 2014; Jordan, Price, & Fitzgerald, 2000). No matter how the survey was administered, the results were all similar in regards to what parents think about sexual health education in public schools.

Author	Participants	Type of Research	Location	Results
Dake et al. (2014)	2400 parents of k-5 th graders	Mailed Survey	Ohio	36% support the reproductive system taught in 3-5 th grade, 51% support teaching abstinence and refusal skills in grades 6-8, and 55% supported teaching birth control and condom use in middle school grades or earlier.
Barr et al. (2013)	1715 parents of k-12 grade children	Mailed Survey	Florida	Support for teaching communication skills (89%), human anatomy/reproductive information (65%), abstinence (61%), HIV.STI (53%), and gender/sexual orientation issues (52%) at the elementary school.
Lagus et al. (2011)	1605 parents with children under 18	Telephone Interview	Minnesota	Parents think young people should receive most of their info from Parents (98%) and teachers (59%) Parents think young people get most of their information from friends (78%) and media (60%).
Tortolero et al. (2011)	1201 parents with children under 18	Telephone Survey	Texas	80% think sex ed should be taught in middle school or earlier 93% support school based sex ed 2/3 believe sex ed should include medically accurate info on abstinence and condoms and contraception Who should determine how sex ed is taught: parents (84%) and health professionals (63%)

Figure 3. Parent Surveys Regarding Sexuality Education in Schools (*Figure Continues*)

Author	Participants	Type of Research	Location	Results
Eisenberg et al. (2008)	1605 parents of k-12 grade children	Telephone Survey	Minnesota	Favor teaching both abstinence and other strategies for pregnancy prevention (89%). The majority of the sex education topics should first be taught in middle school.
Constantine et al. (2007)	1284 parents with children under 18	Telephone Interview	California	89% support CSE Parents younger than 30 were more supportive than older parents
Ito et al. (2006)	1306 parents of k-12 grade children	Telephone Survey	North Carolina	89% support CSE 93% agree sex education should start in middle school or earlier. Content should be determined by parents (96%) and by public health professionals (95%).
Jordan et al. (2000)	597 parents of 7th-12th graders	Mailed Survey	Ohio	94% talk with their teens. 64% believe schools should begin teaching sex education before 7th grade.
Kaiser Foundation (2000)	1001 parents with children under 18	Telephone Survey	National	55% believe that giving teens info about how to obtain and use condoms will not encourage them to have sexual intercourse earlier than they would have otherwise (39% said it would). 77% think such info makes it more likely the teens will practice safe sex now or in the future (17% said it will not).

Figure 3. Parent Surveys Regarding Sexuality Education in Schools

A majority (79-93%) of the parents were supportive of sexuality education being taught in the public schools (Barr, et al., 2014; Bleakley, Hennessy, & Fishbein, 2010; Constantine, et al., 2007; Dake, et al., 2014; Eisenberg, et al., 2008; Ito, et al., 2006; Kaiser Family Foundation, 2000; Tortolero SR.; Johnson K; Peskin M, 2011). Although the majority of parents supported sexual health education topics taught in the schools, some sexual health topics were perceived as controversial. Some of the more controversial topics included: masturbation (77%), sexual orientation (73%), sexual identity (42%), and oral sex (72%) (Jordan, et al., 2000; Kaiser Family Foundation, 2000). Along with finding out what topics should be taught, it is also important to identify when parents think sexual health topics should be taught. Over half (66%) of these studies found that between 79-93% of parents, depending on the study, thought that sexuality education should begin in middle school or earlier (Barr, et al., 2014; Dake, et al., 2014; Eisenberg, et al., 2008; Ito, et al., 2006; Jordan, et al., 2000; Tortolero SR.; Johnson K; Peskin M, 2011). While these studies examined the perceptions of parents of children under 18 years of age, regarding sexual health education, there have not been any national published studies in the United States to assess specifically the parents of elementary school children.

National Health Education Standards

The National Health Education Standards (NHES) are designed to help address the various health issues facing youth (Joint Committee on National Health Education Standards, 2007). There are eight standards which include content and skills that students should know and be able to do (Figure 4). The Centers for Disease Control and

Prevention (CDC) created the Health Education Curriculum Analysis Tool (HECAT) so that schools and school districts can evaluate their health education curricula based on the NHES. The HECAT has a Module titled Sexual Health Curriculum that discusses eight healthy behavior outcomes (HBO) for a pre-K-12 sexual health curriculum (Centers for Disease Control and Prevention, 2012). By using the HECAT, schools can better determine what sexual health topics should be included in sexual health curriculum (Figure 5). Currently, in the United States, 74% of states have adopted national or state health education standards that were based on the 2007 National Health Education Standards (Centers for Disease Control and Prevention, 2012). Specifically, the percent of elementary school districts that have adopted the National Health Education Standards range from 71%-81%; these numbers are higher at both the middle and high school district level (Centers for Disease Control and Prevention, 2013). Overall, 84.1% of districts follow some form of standards (national or state) for elementary school health education (Centers for Disease Control and Prevention, 2013). This is important because it ensures that selected health topics and skills are being taught in the elementary school. With the new Sexuality Health Education Standards, schools can now get a better idea of what sexual health topics should be taught and when.

National Sexuality Education Standards

In 2011, the National Sexuality Education Standards Core Content and Skills were developed by three organizations that focus on sexuality education and youth: Advocates for Youth, Answer, and Sexuality Information and Educator Council of the

Standards	
Standard 1	Students will comprehend concepts related to health promotion and disease prevention to enhance health.
Standard 2	Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
Standard 3	Students will demonstrate the ability to access valid information, products, and services to enhance health.
Standard 4	Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
Standard 5	Students will demonstrate the ability to use decision-making skills to enhance health.
Standard 6	Students will demonstrate the ability to use goal-setting skills to enhance health.
Standard 7	Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
Standard 8	Students will demonstrate the ability to advocate for personal, family, and community health.

Figure 4. The National Health Education Standards. Source: Centers for Disease Control and Prevention, (2013).

Outcomes	
SH-1	Establish and maintain healthy relationships.
SH-2	Be sexually abstinent.
SH-3	Engage in behaviors that prevent or reduce sexually transmitted disease (STD), including HIV infection.
SH-4	Engage in behaviors that prevent or reduce unintended pregnancy.
SH-5	Avoid pressuring others to engage in sexual behaviors.
SH-6	Support others to avoid or reduce sexual risk behaviors.
SH-7	Treat others with courtesy and respect without regard to sexual status
SH-8	Utilize appropriate health services to promote sexual health.

Figure 5. Healthy Behavior Outcomes: Promoting Sexual Health. Source: Centers for Disease Control and Prevention, (2012a).

United States (SIECUS) (Future of Sex Education Initiative, 2012). These three organizations collaborated to create a project titled the Future of Sex Education (FoSE). This project focused on addressing the inconsistent implementation of sexual health education across the United States and limited time allocated to teaching sexual health education topics (Future of Sex Education, 2013). These standards are aligned with the National Health Education Standards, but they specifically focus on seven sexual health topics, including anatomy and physiology, puberty and adolescent development, identity, pregnancy and reproduction, sexually transmitted diseases and HIV, healthy relationships, and personal safety (Future of Sex Education Initiative, 2012). These standards provide a framework for when these topics should be taught in kindergarten-2nd grade, 3rd-5th grade, 6th-8th grade, and 9th-12th grade. One concern is that students may be receiving inadequate information about sexuality after risky behavior patterns are already established (Eaton et al., 2011). These standards will help address this issue by encouraging sexual health from kindergarten until they graduate from high school. These standards are relatively new and there has not been any published research on them. Figures 6 and 7 include the specific performance indicators that should be taught at the K-2nd and 3rd-5th grade level spans.

Parent's Attitudes Regarding Discussing Sexuality Education Topics With Their Child

The current study will also assess when parents have or plan to discuss several sexual health topics identified by the National Sexuality Education Standards (NSES).

Kindergarden-2nd grade:	
AP.2.CC.1	Use proper names for body parts, including male and female anatomy
ID.2.CC.1	Describe differences and similarities in how boys and girls may be expected to act
ID.2.INF.1	Provide examples of how friends, family, media, society and culture influence ways in which boys and girls think they should act
PR.2.CC.1	Explain that all living things reproduce
HR.2.CC.2	Describe the characteristics of a friend
HR.2.IC.2	Identify healthy ways for friends to express feelings to each other
PS.2.CC.1	Explain that all people, including children, have the right to tell others not to touch their body when they do not want to be touched
PS.2.AI.1	Identify parents and other trusted adults they can tell if they are feeling uncomfortable about being touched
PS.2.IC.1	Demonstrate how to respond if someone is touching them in a way that makes them feel uncomfortable
PS.2.SM.1	Demonstrate how to clearly say no, how to leave an uncomfortable situation, and how to identify and talk with a trusted adult if someone is touching them in a way that makes them feel uncomfortable
PS.2.CC.2	Explain what bullying and teasing are
PS.2.CC.3	Explain why bullying and teasing are wrong
PS.2.AI.2	Identify parents and other trusted adults they can tell if they are being bullied or teased
PS.2.IC.2	Demonstrate how to respond if someone is bullying or teasing them

Figure 6. National Sexuality Education Standards (Kindergarden-2nd grade). Source: Future of Sex Education, (2013).

Grades 3rd -5th	
AP.5.CC.1	Describe male and female reproductive systems including body parts and their functions
AP.5.AI.1	Identify medically-accurate information about female and male reproductive anatomy
PD.5.CC.1	Explain the physical, social, and emotional changes that occur during puberty and adolescence
PD.5.INF.1	Describe how peers, media, family, society and culture influence ideas about body image
PD.5.AI.1	Identify medically-accurate information and resources about puberty and personal hygiene
PD.5.SM.1	Explain ways to manage the physical and emotional changes associated with puberty
PD.5.CC.2	Explain how the timing of puberty and adolescent development varies considerably and can still be healthy
PD.5.AI.2	Identify parents or other trusted adults of whom they can ask questions about puberty and adolescent health issues
PD.5.CC.3	Describe how puberty prepares human bodies for the potential to reproduce
ID.5.CC.1	Define sexual orientation as romantic attraction to an individual of the same gender or of a different gender
ID.5.AI.1	Identify parents or other trusted adults to whom they can ask questions about sexual orientation
ID.5.SM.1	Demonstrate ways to treat others with dignity and respect
ID.5.ADV.1	Demonstrate ways students can work together to promote dignity and respect for all people
PR.5.CC.1	Describe the process of human reproduction
SH.5.CC.1	Define HIV and identify some age-appropriate methods of transmission, as well as ways to prevent transmission
HR.5.CC.1	Describe the characteristics of healthy relationships (e.g., family, friends, peers)
HR.5.INF.1	Compare positive and negative ways friends and peers can influence relationships
HR.5.AI.1	Identify parents and other trusted adults they can talk to about relationships

Figure 7. National Sexuality Education Standards (3rd-5th grade). Source: Future of Sex Education, (2013).

(Figure continues)

Grades 3rd -5th	
HR.5.IC.1	Demonstrate positive ways to communicate differences of opinion while maintaining relationships
HR.5.SM.1	Demonstrate ways to treat others with dignity and respect
PS.5.CC.1	Define teasing, harassment and bullying and explain why they are wrong
PS.5.INF.1	Explain why people tease, harass or bully others
PS.5.AI.1	Identify parents and other trusted adults students can tell if they are being teased, harassed or bullied
PS.5.IC.1	Demonstrate ways to communicate about how one is being treated
PS.5.SM.1	Discuss effective ways in which students could respond when they are or someone else is being teased, harassed or bullied
PS.5.ADV.1	Persuade others to take action when someone else is being teased, harassed or bullied
PS.5.CC.2	Define sexual harassment and sexual abuse
PS.5.AI.2	Identify parents or other trusted adults they can tell if they are being sexually harassed or abused
PS.5.IC.2	Demonstrate refusal skills (clear “no” statement, walk away, repeat refusal)

Figure 7. National Sexuality Education Standards (3rd-5th grade). Source: Future of Sex Education, (2013).

The majority of adults (88%) agree that they should talk to their children about sexual health education, but often do not know what to talk about, how to say it, or when to start (Albert, 2012). The standards could help parents identify what sexual health topics should be taught and at around what grade. Research has shown that mothers are more likely to talk to their children about sexual topics as compared to fathers (Kapungu et al., 2010; Rothman, Miller, Terpeluk, Glauber, & Randel, 2011; Walker, 2001; Ellen K. Wilson, Dalberth, Koo, & Gard, 2010), and that parent-child communication was more likely between mothers with older adolescent daughters ages 15-20 than ages 11-14 (McRee, Reiter, Gottlieb, & Brewer, 2011). Another study (Jerman & Constantine, 2010) found that the number of sex education topics discussed by mothers and fathers increased as adolescent age level increased. This information is important because it shows that parents are discussing sexuality education topics at some point in their child's life more likely when the child is older.

Parents were cited as the most influential person in teenagers lives when they make decisions about sex (Albert, 2012). Studies show that parents who communicate with their children can greatly impact the child's decisions to engage in certain behaviors. Parents who engaged in early sexual communication with their adolescents were associated with several factors such as: later age of sexual initiation, consistent condom use, and reduced likelihood of STI's (Hutchinson, 2002). Teens who have had discussions with their parents about using condoms when engaging in sexual behaviors were more likely to report consistent condom use (Hadley et al., 2009). Parents, specifically mothers, who have talked to their children about sexual health behaviors, have also been shown to have had a positive impact on their children. Teens who

communicated with their mother about sexual pressure from dating partners were twice as likely to practice abstinence or consistent condom use (Teitelman, Ratcliffe, & Cederbaum, 2008). However, teens who communicated very little or not at all with their parents were less likely to use contraception, not use condoms, fail to communicate with their sex partners, and indicated lower self-efficacy to negotiate safer sex (DiClemente et al., 2001). Another researcher found that teens who did not communicate with their parents were five times more likely to report multiple sex partners, 3.5 times more likely to have low self-efficacy for condom negotiation, and 2.7 times more likely to report using drugs or alcohol before having sex (Crosby, Hanson, & Rager, 2009). Children and teens need and want someone to provide them with accurate age and developmentally appropriate information and guidance regarding sexual health education. Almost 9 in 10 (87%) teens said it would be easier to delay sexual activity and avoid pregnancy if they were able to better communicate with their parents (Albert, 2012).

Parents play an important role in their child's life in preparing them with the content and skills to make good decisions. A study of 5th graders (age 10-11) in 16 Washington, DC elementary schools found that 18% of boys and 5% of girls reported having sex, and that 56% of boys and 22% of girls anticipated having sex in the next year (Anderson et al., 2011). If children are thinking about and engaging in these risky sexual behaviors they need information to make good decisions. A study of parents of 5th-6th graders found that parents would like their child to receive information about sex at a young age, with over half of the parents preferred ages 10 or younger (E. K. Wilson & Koo, 2010). That same study also found that 47% of fathers and 85% of mothers had already talked to their 5th-6th graders about sex. These parents recommended as a

strategy to protect their children would be to provide sexual health information that is age appropriate during the elementary school years prior to the children becoming engaged in sexual activity (E. K. Wilson & Koo, 2010). Providing age and developmentally appropriate sexuality education is an important aspect of implementing sexual health in the schools. Another factor to consider in determining when to teach select sexual health topics is the notion of a child being a sensation seeker which increases their chance of engaging in risky behaviors.

Sensation Seeking and High Risk Behaviors

Sensation seeking is a personality trait described as “the need for varied, novel and complex sensations and experiences, and the willingness to take physical and social risks for the sake of such experiences” (Zuckerman, 1979, p. 10). Individuals who have high sensation seeking scores are more likely to place themselves in risky situations, which increase their chances of engaging in high-risk behaviors. Sensation seeking is strongly related to several high-risk behaviors such as: use of drugs, alcohol, and/or tobacco (for those under the legal age) (Charnigo et al., 2013; Donohew et al., 2000; Rick H. Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002; Romer & Hennessy, 2007; Stephenson, Hoyle, Palmgreen, & Slater, 2003), high-risk sexual behaviors (Charnigo, et al., 2013; Donohew, et al., 2000; Gaither & Sellbom, 2003; Rick H. Hoyle, et al., 2002; Khurana et al., 2012; Spitalnick et al., 2007), and risky child behaviors such as rule-breaking (Jensen, Weaver, Ivic, & Imboden, 2011).

Several sensation seeking scales have been developed to show the link between sensation seeking and risk behaviors. Sensation seeking scales range from measuring 40-

items (Zuckerman, Eysenck, & Eysenck, 1978) to scales of 2-items (Stephenson, et al., 2003). The original sensation seeking scale had 40-items divided into four subscales: thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility (Zuckerman, et al., 1978). There have been several studies that have tried to reduce the number of items in order to make the scale more ideal for larger surveys. The Brief Sensation Seeking Scale (BSSS) was developed to include 2-items for each of the 4 factor subscales (Rick H. Hoyle, et al., 2002), those items included:

Thrill and adventure seeking

- I like to do frightening things.
- I would like to try bungee jumping.

Experience seeking

- I would like to explore strange places.
- I would like to take off on a trip with no pre-planned routes or timetables.

Disinhibition

- I like wild parties.
- I would love to have new and exciting experiences, even if they are illegal

Boredom susceptibility

- I get restless when I spend too much time at home
- I prefer friends who are excitingly unpredictable

A five-point Likert scale was used to measure these items (strongly disagree, disagree, neither disagree nor agree, agree, and strongly agree) with an internal reliability of .76

(Rick H. Hoyle, et al., 2002). Other studies (Charnigo, et al., 2013; Jensen, et al., 2011; Stephenson, et al., 2003) have used this scale and have produced similar outcome results in regard to sensation seeking and select health behaviors. The BSSS has been evaluated using adults and adolescents as well as children in the fourth, fifth, and sixth grades (Jensen, et al., 2011). However, some researchers still believe that this scale is too cumbersome for large survey studies. Stephenson and colleagues (2003) have taken the BSSS and reduced it in size to cover one item for each of the four factor subscales, those items included:

Thrill and adventure seeking

- I like to do frightening things.

Experience seeking

- I would like to explore strange places.

Disinhibition

- I like new and exciting experiences, even if I have to break the rules.

Boredom susceptibility

- I prefer friends who are exciting and unpredictable.

A four-point Likert-type scale was used to measure these items (strongly disagree, disagree, agree, and strongly agree). This scale scored an internal reliability of .66 (Stephenson, et al., 2003). There have been other studies that have also used the BSSS-4 scale (Khurana, et al., 2012; Romer & Hennessy, 2007; Vallone, Allen, Clayton, & Xiao, 2007) producing similar results in regards to internal reliability scores. The BSSS-4 has been evaluated mainly using adolescents but also has been evaluated using children as young as ten (Khurana, et al., 2012). In a related study, researchers examined four of the

sensation seeking scales and found that the BSSS-4 "appears to adequately capture the tendencies of impulsive sensation seekers while also exhibiting a strong conceptual link to the original four-dimensional conceptualization of sensation seeking" (Stephenson, et al., 2003, p. 284). Even though the internal reliability score is somewhat low ($\alpha = .66$), the results from that scale have proven to be similar to the results produced from the larger sensation seeking scales. There has been one other scale developed to measure sensation seeking for large survey situations. It includes only 2-items: which ask how often the respondent:

- Did dangerous things for fun.
- Did exciting things even if they are dangerous.

A five-point Likert-type scale was used to measure these items ranging from, very often (1) and not at all (5). This scale scored an internal reliability of .81 (Slater, 2003).

Stephenson and colleagues "evaluation indicates that the four- and two-items measures of sensation seeking are psychometrically sound and, when necessary, can be substituted for their longer counterparts without significant loss of predictive power" (Stephenson, et al., 2003, p. 285).

Several studies have reported that sensation seeking is strongly related to high-risk sexual behaviors among various age groups (Charnigo, et al., 2013; Donohew, et al., 2000; Gaither & Sellbom, 2003; Rick H. Hoyle, et al., 2002; Khurana, et al., 2012; Spitalnick, et al., 2007). A review of the literature found that sensation seeking predicted all forms of sexual risk taking (number of partners, unprotected sex, and high-risk encounter) examined in that study (R. H. Hoyle, Fejfar, & Miller, 2000). A comprehensive review of the literature failed to find any published studies in the United

States that have looked at parents perceptions of their child being a sensation seeker and the impact that might have on the parents decision regarding when to talk with their child about sexual health education topics and if that time differs from parents whose children are not sensation seekers.

Health Belief Model

The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviors by focusing on attitudes and beliefs of individuals. The HBM was developed in the 1950's by three social psychologists: Godfrey Hochbaum, Irwin Rosenstock, and Stephen Kegels from the United States Public Health Service (USPHS) to explain the lack of public participation in health screening and prevention programs (Glanz, et al., 2008). Originally the Health Belief Model consisted of four constructs: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. Today there are two more constructs in this model which include cues to action and self-efficacy. The Health Belief Model is one of the most widely used conceptual frameworks in health behavior.

This study used two components from the Health Belief Model to identify parent's perceived barriers and benefits to teaching sexuality education at the elementary school level. Perceived barriers is defined as the negative outcomes a person believed will result from some action (Glanz, et al., 2008). In this study parents were asked what they thought were the challenges (barriers) to teaching sexuality education in the elementary school. Perceived benefits are defined as the positive outcomes a person believes will result from some action. In this study parents were asked what they think

are the benefits of having sexual health education taught in their child's elementary school. By identifying the perceived barriers and benefits to teaching sexual health education at the elementary level we can focus on those areas to help increase the teaching of sexual health education in elementary schools.

Summary

The purpose of this chapter was to review what literature exists that is associated with sexual health issues. Research shows that parents are supportive of sexuality education taking place in the schools in the elementary and middle school grades. This information can help support the implementation of the new National Sexuality Education Standards in public schools.

Parents support sexuality education being taught in schools and they also believe they should be discussing sexuality information with their child. Research has shown that parents who have communicated with their child have a greater impact on the students' choices and actions regarding sexual behaviors.

Education regarding sexuality education is necessary and may be in greater need for children who are high sensation seekers due to an increased risk of engaging in high risk behaviors. Several studies have reported that high sensation seeking individuals are strongly related to risky sexual behaviors among various age groups. This variable (sensation seeking) has not been used to study parents' perceptions of their child being a high sensation seeker and the impact that having a child who is a high sensation seeker might have on the parents' decisions regarding when sexuality education topics should be taught in school and at home.

Chapter Three

Methods

The sections included in this chapter are as follows: Sampling Methods, Instrument Development, Instrument Testing, Procedures for Data Collection, and Data Analysis Procedures. Additionally, this chapter includes the design, development, and implementation of the questionnaire to examine elementary school children's parents/caregiver's perceptions regarding sexual health education in school and when they plan to discuss sexual health education topics with their children.

Sampling Methods

The participants of this study consisted of a random stratified sample of 800 parents of elementary school aged children from across the United States. These parents were randomly selected from a commercial mailing list company (American Clearing, Inc). A priori power analysis was conducted for this study. Based on the total population of 34 million family households (U.S. Census Bureau, 2013) in the United States using a 50/50 split in response to whether sexuality education should be taught in schools, it was determined that a sample of 385 parents would be needed to make inferences to the total population with a sampling error of $\pm 5\%$ at the 95% confidence level (Raosoft, 2013). Factoring in a potential response rate of about 50%, 800 parents of elementary school age children were randomly selected to receive the questionnaire.

Instrument Development

A four-page, 23-item closed format questionnaire was used to assess the perceptions of parents of elementary school aged children (Appendix B). More

specifically, the items examined including the following: the perceived barriers and benefits to teaching elementary school sexuality education, parents beliefs regarding when sexuality education skills should be taught in school, what grades developmentally-appropriate sexuality education topics should begin at school, what sexuality education topics parents discussed or planned to discuss with their child, how well parents thought they had communicated with their child, and a sensation seeking scale regarding the parents elementary child. A five-point Likert-type scale was used to measure the respondents' beliefs regarding when sexual health education skills should be taught, when they believe sexual health topics should be taught at school, and when they believed sexual health topics should be taught at home. All three of these questions were answered using a five-point scale, a 0 indicated that the item was preferred to not be taught at all, a score of 1 indicated the item was preferred to be taught in kindergarten - 2nd grade, a 2 indicated the item was preferred to be taught in 3rd-5th grade, a 3 indicated the item was preferred to be taught in 6th-8th grade, and 4 being taught in 9th-12th grade. Sensation seeking was assessed using the Brief Sensation Seeking Scale-4 (BSSS-4), a validated, 4-item measure which ranged from 1 indicating strongly agree and a 4 indicating strongly disagree (Stephenson, et al., 2003). The sensation seeking scale ranged from 4-16. The sensation seeking scale was split into two groups (high sensation seekers and low sensation seekers). The scale was split so that anyone with a score from 4-9 would be titled a low sensation seeker and anyone with a total score of 11-16 would be a high sensation seeker. Anyone with the median score of 10 was coded as missing.

Reading level of a questionnaire is also important to consider when developing a questionnaire for the public. There are multiple ways to measure readability levels some

of the most commonly used reading-level assessment tools are SMOG (Simple Measure of Gobbledygook), Gunning FOG (Frequency of Gobbledygook), the Flesch-Kincaid grade level. The readability level reported from using the SMOG index was at ninth grade reading level (Readability Formulas, 2013). When using Gunning Fog the reading level was reported at the eleventh grade level (Readability Formulas, 2013). And when using the Flesch-Kincaid grade level test the readability level was reported at sixth grade.

Instrument Testing

The instrument was based on a comprehensive review of the literature in order to establish the face validity of the items. To establish content validity, the questionnaire was assessed by mailing the draft questionnaire to seven experts in the field of sexual health education ($n=4$) and survey research ($n=3$) (Appendix C). Each of these experts was sent the questionnaire with a cover letter explaining the study. Feedback from those selected individuals was included in the revision of the questionnaire.

The questionnaire was pilot tested for stability reliability through testing and retesting using a convenience sample, which included parents with elementary age children ($n=25$). Parents were sent the questionnaire with a cover letter explaining the study. After completing the two waves of questionnaires parents were given a \$5 bill. This sample of parents was sent the survey and then sent the survey one week later (Dillman, Smyth, & Christian, 2009). Using SPSS 17.0 to analyze data, Wilcoxon Signed Ranks, Pearson Correlation Coefficients and percent agreements were calculated to determine the temporal reliability of the instrument. Pearson product moment correlations were conducted on the perceived number of barriers, the perceived number of benefits,

and the sensation seeking scale. The Pearson product moment correlation was .45 ($p < .05$) for the number of perceived barriers, .80 ($p < .01$) for the number of perceived benefits, and .81 ($p < .01$) for the brief sensation seeking scale. All other nominal response questions were analyzed using percent agreement and they ranged from 81-100% depending on the item.

Procedures for Data Collection

Following protocol clearance from the University Human Subjects Review Board, potential respondents were contacted by postal mail (Appendix D). A three-wave mailing procedure was used to maximize the response rate (Dillman, et al., 2009). The first mailing included: a personalized, hand-signed cover letter that introduced the study, requesting the recipient's confidential participation, and provided directions for filling out the questionnaire. Some of the directions included: filling out the survey for their elementary school aged child (if they have more than one child we asked that they use their oldest elementary age child) and if they do not have an elementary school age child we asked that they mark the box at the bottom of the cover letter indicating they do not have an elementary child and only return the cover letter. There was also a copy of the 4-page questionnaire on colored paper, a \$1.00 bill as an incentive for participation, and a return envelope addressed to the principal investigator with first-class postage. A second mailing consisting of a revised cover letter, another copy of the questionnaire, and a self-addressed stamped envelope was sent to potential participants who did not respond to our initial request after two weeks. A third mailing was sent after an additional two weeks that included a revised cover letter, another copy of the questionnaire, and a self-

addressed stamped envelope sent to potential participants who did not respond to our second request. These techniques have been shown to maximize survey return rates (Edwards et al., 2009; King, Pealer, & Bernard, 2001). Return of the completed survey served as consent for use of the answers provided.

The participants for this study were collected using a purchased mailing list from a company called InfoUSA. A random sample of 800 parents in the United States who have a child between the ages of 5-12 years old was requested. The first wave of this mailing produced a 14% response rate. During this wave 159 individuals responded saying they did not have a 5-12 year old child. After receiving a low response rate and an inaccurate mailing list (parents did not have an elementary aged child) it was decided to purchase another mailing list from a different company and not use the results from the first company. The second company used was Accurate Leads; this company provided a mailing list of 800 parents who had a child who was born in 2002-2009. The second wave 1 from the new mailing company produced a response rate of 4%, where 58 people of the 104 who returned the survey did not have a 5-12 year old child. Literature providing best practice on survey research supports that each additional wave sent will result in a smaller response rate than the last wave that was conducted. For example, since there was 4% response rate for wave 1, it would be expected that wave 2 would produce a response rate smaller than 4%. Thus, it was decided to use the first mailing company and continue doing waves 2 and 3 with that mailing list.

Data Analysis Procedures

Questionnaire items were coded and returned questionnaires were entered into the Statistical Package for the Social Sciences (SPSS) 17.0. Data Analysis included descriptive statistics with a report of the appropriate frequencies, means, and standard deviations to describe participants' demographics and background characteristics (Hypotheses 1.1, 4.1, 7.1, 7.2 and 8.1). Chi-Square Tests were conducted to determine differences in the proportions of two or more groups (Hypotheses 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 8.1, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 9.11, 9.12, and 9.13). T-tests were calculated to determine differences between dichotomous independent and parametric dependent variables (Hypotheses 3.1, 3.10, 3.12, 5.1, 5.10, 5.12, 5.13, 6.1, 6.10, 6.12, and 6.13). Analyses of variance tests (ANOVA) were conducted to determine differences among categorical independent and parametric dependent variables (Hypotheses 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.11, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.12, and 6.13). A binary logistic regression was conducted to determine which variables were more likely to support the dependent variable (Hypotheses 10.1). The *a priori* alpha level for statistical significance was set at $p \leq .05$ to reduce making a Type II error.

An internal reliability test was run on the final response questionnaire for the one scale included on the instrument. The sensation seeking scale had a Cronbach alpha of .82 for the four items that were measured. A post-hoc power analysis was determined using a population size of 34 million families in the United States for the 95% confidence level, with a 90/10 split and a plus or minus 5% sampling error, a sample size of 139 parents was needed. Due to respondents being homogeneous in perceptions regarding

whether sex education should be taught in the school a 90/10 split was used. After the three wave postal mailing, there were 153 qualified respondents (24%), exceeding what was needed for external validity.

Chapter Four

Results

The results from the statistical analyses of the responses gathered are presented in this chapter. This chapter consists of the following sections: Response Rate; Demographic Characteristics of the Parents; Background Information Regarding Sexuality Education in Schools, Background Information Regarding Sexuality Education Taught at Home, Summary of Research Findings, Hypotheses Testing, and Summary.

Response Rate

The participants for this study were selected from a commercial mailing list company (InfoUSA). The postal mailings included 800 parents that had elementary school age children. After a three-wave postal mailing, 117 individuals were not eligible due to not having a child in elementary school and 53 of the surveys were sent back as undeliverable. Of the original postal mailings of 800, there were 630 that were eligible. One hundred and fifty three surveys were returned for a response rate of 24% (153/630).

Demographic Characteristics of the Parents

The demographic characteristics of the parents are shown in Table 1. Of the 153 parents who responded to the demographic questions, just over half were female (58%) and the majority of the parents were white (86%). A plurality of the parents responded that they were Republicans (36%); were Catholics (33%); lived in suburban areas (63%); their children attended public school (82%); and the children lived with both birth parents (78%).

Table 1

Demographics Characteristics of the Parents

Item	*Total n (%)	
Sex		
Female	89	(58%)
Male	65	(42%)
Race/ethnicity		
Asian	7	(5%)
Black	10	(7%)
Hispanic	4	(3%)
White	131	(86%)
Other	1	(1%)
Highest grade or level of education		
Some high school	1	(1%)
High school graduate/GED	15	(10%)
Some college	32	(21%)
College graduate	58	(38%)
Post graduate education	46	(30%)
Household Income for 2012		
\$24,999 or less	8	(5%)
\$25,000- \$49,999	22	(15%)
\$50,000-\$89,999	43	(29%)
\$90,000 or more	76	(51%)
What type of school does your child attend?		
Public	126	(82%)
Private	24	(16%)
Home School	4	(3%)
Where do you live?		
Suburban	96	(63%)
Rural	38	(25%)
Urban	19	(12%)
What is your political party?		
Democrat	41	(28%)
Republican	53	(36%)
Independent	25	(17%)
Libertarian	2	(1%)
None	27	(18%)

(Table continues)

Table 1 (continued)

Demographics Characteristics of the Parents

Item	*Total n (%)
What is your religious preference?	
Catholic	50 (33%)
Jewish	3 (2%)
Protestant	27 (19%)
Christian	15 (10%)
Not religious	32 (22%)
Other: (Lutheran (n=3), Hindu (n=1), Methodist (n=3), Baptist (n=3), Mormon (n=4), Buddhist (n=1), Apostolic (n=1), Presbyterian (n=1), Muslim (n=1), did not identify another religion (n=3))	21 (14%)
How often does your child attend religious services?	
Rarely/Never	26 (17%)
Few times a year	24 (16%)
1-3 times a month	36 (24%)
Once a week	45 (29%)
More than once a week	21 (14%)
With whom does your child live?	
Both birth parents	120 (78%)
Single Parent	15 (10%)
Birth parent and step-parent	12 (8%)
Other: (grandparent(s) (n=2), adopted child, divorced parents (n=3))	6 (3%)
Where do you live in the U.S.?	
Midwest	48 (31%)
Northeast	45 (29%)
South	39 (25%)
West	22 (14%)

*n=153, percent's may not add up to 100% due to rounding of the percentages

Background Information Regarding Sexuality Education Taught in Schools

There were a few items on the questionnaire that asked parents to identify if age appropriate sex education was taught in their oldest elementary school child's school and if they think age appropriate sexuality topics should be taught in school. If the parents responded yes that they thought sexuality education should be taught in school, they were asked to identify the grade level in which students should begin to be taught about sexuality education. Descriptive statistics indicated that 43% of parents responded that their child's elementary school taught sexuality education; compared to 31% that indicated their school did not and 26% that responded that they did not know. When asked whether they thought that age appropriate sexuality education should be taught in school, the majority (92%) of the parents responded affirmatively. Of those 92%, just under half (48%) of the parents reported sexuality education should start in the 6-8th grades followed by 42% that reported it should begin being taught in K-5th grades. Only 10% of the parents believed that sexual education should begin being taught in the 9-12th grades.

Background Information Regarding Sexuality Education Taught at Home

Parents were also asked questions about their own communication at home with their elementary age child. Twenty percent of the parents responded that they had not spoken with their child on this topic. However, many of the parents claimed their communication with their child regarding sexuality education was good (39%) or excellent (23%). The remaining parents claimed to have had fair (18%) or poor (1%) communication with their child regarding sexuality education.

Another item on the instrument asked parents when they had provided sexual health information to their child. Table 2 shows the most prevalent answer to the question was when a child asks those types of questions (70%), followed by when a family/local event occurred (e.g. a cousin became pregnant) (46%), and when media TV shows or songs related to sexual health open the door to talk (46%). Only 28% of parents indicated that they actually planned times to talk with their child about sexual issues.

Summary of Research Findings

Sexuality Education Topics Taught in School

Parents surveyed were asked what grade they thought 13 selected sexuality topics that should begin being taught in school (Table 3). A majority of parents believed that six of the thirteen topics should begin being taught in the elementary school grades (K-5th) as compared to being taught in 6-8, 9-12, or not at all. Those six topics included: bullying prevention (90%), friendship (86%), healthy relationships (75%), proper names for body parts (64%), different kinds of families (58%), and sexual abuse prevention (57%).

An independent samples t-test was calculated and a statistical difference was found between parent's gender and the number of sexuality topics they think should be taught in K-5th grades ($t = 3.05$, $df = 152$, $p = .003$). For fathers, the mean number of topics they believed should be taught in school was 5 ($x = 5.32$, $sd = 3.31$) and for mothers, the mean number of topics was 7 of the 13 topics ($x = 7.00$, $sd = 3.42$).

Table 2

When Parents Have Provided Sexuality Information to Their Elementary Child

Items	*Total n (%)
When my child asks me questions	107 (70%)
When a family/local event occurred (e.g. a cousin became pregnant)	70 (46%)
When media TV shows or songs related to sexual health open the door to talk.	70 (46%)
When a sexual health topic was discussed at school	61 (40%)
I have planned times that I talk to my child about sexual issues	43 (28%)
I have <u>not</u> spoken to my child about sexual issues	26 (17%)
Other: cub/boy scouts (n=3), natural opportunities arise (n=1)	4 (2%)
*n=153, percent's will not add up to 100% due to rounding up each percentage and participants could check all that applied.	

Table 3

Parents Perceptions of the Best Time to Begin Teaching Concepts Related to Sexuality Education at School

Items	*Total n (%)				
Content Topics:	Grade Span				
	K-2	3-5	6-8	9-12	Not at all
Friendship	100 (65%)	33 (21%)	14 (9%)	1 (1%)	6 (4%)
Bullying prevention	99 (64%)	40 (26%)	12 (8%)	1 (1%)	2 (1%)
Healthy relationships	72 (47%)	42 (28%)	28 (18%)	5 (3%)	6 (4%)
Sexual abuse prevention	67 (44%)	35 (23%)	30 (20%)	15 (10%)	7 (5%)
Proper names for body parts (including male and female anatomy)	47 (31%)	51 (33%)	46 (30%)	7 (5%)	3 (2%)
Different kinds of families	44 (29%)	44 (29%)	30 (20%)	8 (5%)	27 (18%)
Gender roles (how society may expect boys and girls to act)	31 (20%)	35 (23%)	43 (28%)	10 (7%)	35 (23%)
Male and female reproductive system	8 (5%)	48 (31%)	76 (49%)	18 (12%)	4 (3%)
Define sexual orientation	7 (5%)	23 (15%)	63 (41%)	24 (16%)	36 (24%)
Puberty	5 (3%)	67 (43%)	72 (47%)	8 (5%)	2 (1%)
Reproduction	4 (3%)	33 (22%)	86 (57%)	24 (16%)	5 (3%)
HIV/STD prevention	3 (2%)	17 (11%)	95 (62%)	30 (20%)	9 (6%)
Pregnancy prevention	1 (1%)	19 (12%)	94 (61%)	31 (20%)	8 (5%)
Other please identify: How to resist pressure to have sex			1 (.2%)		
*n=153, percent's may not add up to 100% due to rounding up each percentage					

These results indicate that mothers perceived more sexuality education topics should be discussed in elementary school as compared to fathers.

Sensation Seeking Children and Earlier Sexuality Education in School

Parents were asked to respond to an item on the questionnaire that examined sensation seeking behaviors. Thirteen chi-square analyses were calculated to determine if there were any differences between parents beliefs regarding when sexuality education topics should be taught in school (K-5th, 6-8th, 9-12th) depending on if they had a high or low sensation seeking child. Two chi-square analyses indicated statistically significant differences for the topics of sexual orientation and different kinds of families. A statistically significant difference was found between parents with high sensation seeking children and those with a low sensation seeking child regarding when teaching about sexual orientation should begin being taught in schools ($\chi^2 = 12.61$, $df=2$, $p = .002$). Parents who had a high sensation seeking child thought sexual orientation should be taught in K-5th grades (58%) compared to parents that had a low sensation seeking child (19%). Another statistically significant difference was found between parents with a high sensation seeking child and those with a low sensation seeking child regarding when teaching about different kinds of families should begin being taught in schools ($\chi^2 = 7.08$, $df=2$, $p = .03$). Parents who had a high sensation seeking child thought teaching about different kinds of families should be taught in K-5th grades (95%) compared to parents with a low sensation seeking child (65%).

Teaching National Health Education Skills in Schools

Parents were asked to respond to an item on the questionnaire that examined five skills related to teaching sexuality education at the elementary school level (Table 4).

Descriptive statistics indicated that a majority of the parents surveyed believed that four of the five skills should begin being taught in the elementary school grades (K-5th). The topics and the percentage of the parents that supported these skills being taught in elementary school included: communication (81%), advocacy (72%), analyze influences (63%), and access information (62%). A plurality of the parents surveyed believed that self-management (46%) should also be taught in the elementary school grades.

Barriers to Teaching Sexuality Education in Elementary Schools

Parents surveyed were asked to respond to an item on the questionnaire that examined seven barriers related to teaching sexuality education at the elementary school level (Table 5). The top two barriers that parents perceived were: some parents did not want it taught in schools (80%) and that teachers were not at ease teaching it (48%). An ANOVA found a statistically significant difference based on the type of school their child attended and perceived barriers to implementing sexuality education at their schools ($F=3.44$, $df=2$, $p=.04$). Multivariate statistics indicated that the group means and standard deviations for parents whose children attended public schools ($x=2.47$, $sd=1.53$), children that attended private schools ($x=2.29$, $sd=1.33$), and children that were home schooled ($x=.50$, $sd=.58$) were different in regards to number of perceived barriers to implementing sexuality education at their schools. A Scheffe post hoc analysis showed that there was one statistically significant difference between those who attended public schools and those children who were home schooled ($p<.04$).

Table 4

Parents Perceptions of when the Best Time to Begin Teaching Health Skills Related to Sexuality Education in School.

Skills	K-2	3-5	6-8	9-12	Not at all
Communication (e.g., demonstrate how to express feelings and how to respond to someone who is touching them in a way that makes them feel uncomfortable)	78 (51%)	46 (30%)	19 (13%)	4 (3%)	5 (3%)
Advocacy (e.g., work together with other students to promote respect for all people)	68 (45%)	39 (27%)	31 (20%)	6 (4%)	8 (5%)
Access Information (e.g., identify trusted adults they can talk to about puberty, female and male reproductive system, and/or sexual abuse)	35 (23%)	60 (39%)	44 (29%)	10 (7%)	4 (3%)
Analyze Influences (e.g., describe how friends, family, media, and culture influence how boys and girls act, ideas about body image, and their relationships)	24 (16%)	72 (47%)	42 (28%)	4 (3%)	11 (7%)
Self-Management (e.g., explain ways to manage the changes with puberty)	5 (3%)	65 (43%)	70 (46%)	8 (5%)	5 (3%)
*n=153, percent's may not add up to 100% due to rounding up each percentage					

Table 5

Parents' Perceived Challenges to Teaching Sexuality Education in Elementary Schools

Items	*Total n (%)
Some parents do not want it taught in the school	123 (80%)
Teachers are not at ease teaching it	73 (48%)
School policy does not allow it to be taught at the elementary level	40 (26%)
Sex education is not a subject on standardized tests	35 (23%)
School administrators do not want it taught	34 (22%)
It will make children more likely to want to have sex	15 (10%)
There are no challenges	5 (3%)
*n=153, percent's may not add up to 100% due to rounding and participants could check all that applied	

Benefits to Teaching Sexuality Education in Elementary Schools

Parents surveyed were asked to respond to an item on the questionnaire that examined eight potential benefits of teaching sexuality education at the elementary school level (Table 6). The top two benefits that parents perceived were: students will learn how to prevent or respond to sexual abuse (79%) and students will be prepared to make informed healthy decisions (78%).

Independent samples t-test and ANOVA statistical analyses were conducted to determine if there were any differences in number of perceived benefits to teaching sexual health education among 13 selected demographic predictor variables. Four analyses found a statistically significant difference. An independent samples t-test was calculated and a statistically significant difference was found between parent's gender on the number of perceived benefits regarding teaching sexuality education in schools ($t = -2.21$, $df = 152$, $p = .03$). For fathers, the mean number of benefits was ($x = 4.40$, $sd = 2.36$) and for mothers, the mean number of benefits were ($x = 5.22$, $sd = 2.23$). This indicates that mothers perceived more benefits than fathers.

Three ANOVA analyses found significant difference by political party affiliation, type of school the child attended, and the amount of time the child spent attending religious services and number of perceived benefits regarding teaching sexuality education. One analysis found a statistical difference by parent's political party affiliation. Analysis indicated that parents who were Democrats ($x = 5.73$, $sd = 1.83$), Republican ($x = 4.42$, $sd = 2.37$), Independent ($x = 4.8$, $sd = 2.42$), or none ($x = 5.0$, $sd = 2.27$) perceived a different number of benefits. A Scheffe post hoc analysis showed that there were no significant differences between any two groups.

Table 6

Parents' Perceived Benefits to Teaching Sexuality Education in Elementary Schools

Items	*Total n (%)
Students will learn how to prevent or respond to sexual abuse	122 (79%)
Students will be prepared to make informed healthy decisions	120 (78%)
Students will learn about their own bodies	113 (73%)
Students will learn how to prevent sexually transmitted diseases	103 (67%)
Students will learn how to prevent getting pregnant	102 (66%)
Students will be more at ease talking to their parents about sexual issues	100 (64%)
Students may delay when they have sex	88 (57%)
There are no benefits	10 (7%)
*n=153, percent's will not add up to 100% due to rounding up each percentage and participants could check all that applied	

Another ANOVA found a significant difference based on the type of school their child attended and their perceived benefits to implementing sexuality education in the schools ($F= 3.65$, $df= 2$, $p= .03$). Descriptive statistics indicated that parents whose children attended public schools ($x= 5.02$, $sd = 2.30$), private schools ($x= 4.60$, $sd = 2.19$), and those who were home schooled ($x=2.0$, $sd =2.31$) perceived a different number of benefits. A Scheffe post hoc analysis showed that there was a statistically significant difference between children who attended public schools and those children who were homeschooled ($p < .04$).

The third ANOVA found that there was a statistically significant difference by the amount of time children spent attending faith based services and perceived benefits to implementing sexuality education in schools ($F= 2.55$, $df= 4$, $p= .04$). Descriptive statistics indicate that the group means of parents whose children attended religious services rarely/never ($x= 5.38$, $sd = 2.02$), a few times a year ($x= 5.29$, $sd = 2.24$), 1-3 times a month ($x=5.44$, $sd =2.13$), once a week ($x= 4.42$, $sd = 2.41$), and more than once a week ($x= 3.90$, $sd = 2.29$) were numerically different. However, a Scheffe post hoc analysis showed that there were no statistically significant differences in perceived benefits by frequency of attending religious services.

Who Should Make the Final Decision Regarding What Sexuality Education Topics are Taught in Schools

Parents surveyed were asked to respond to an item on the questionnaire that examined who they thought should make the final decision on what sexuality education topics are taught in school. The parents were provided with nine categories of individuals and were asked to check all the groups that should have that responsibility (Table 7). The

Table 7

Parents Perceptions of Who Should Make the Final Decision on What Sexuality Education Topics Should be Taught in Elementary Schools.

Items	*Total n (%)
Parents	132 (86%)
Health Teachers	68 (46%)
Teachers	55 (36%)
School Boards	45 (29%)
School Administrators	45 (29%)
School Nurse	42 (27%)
State Department of Education	42 (27%)
School District Curriculum Coordinator	30 (20%)
Religious Leaders	16 (10%)
Other: Medical Experts	1 (.2%)
*n=153, percent's will not add up to 100% due to rounding and participants could check all that applied	

top two groups that parents thought should be in charge of making the final decisions included themselves (86%) and health teachers (46%).

Parent Gender and the Impact on Their Communication Level

Parents surveyed were asked how well they communicated with their children. A chi-square analysis showed a significant difference between mothers and fathers ($\chi^2 = 9.32$, $df = 3$, $p = .03$) with mothers more likely to report excellent communication skills (32%) compared to fathers (11%).

Sexuality Education Topics Parents Discuss with Their Children at Home

Parents surveyed were given a list of thirteen sexuality topics and were asked to identify when they taught or planned to teach the topics (Table 8). A majority of the parents believed that 7 of the 13 topics should begin being taught at home when their child is in the elementary school grades (K-5th). Those seven topics include: bullying prevention (93%), friendship (90%), healthy relationships (83%), proper names for body parts (80%), sexual abuse prevention (74%), different kinds of families (67%), and puberty (53%).

An independent samples t-test was calculated and a statistical difference was found between parent's gender and the number of sexuality topics they planned to discuss with their children in K-5th grades ($t = 3.73$, $df = 152$, $p = .001$). For fathers, the mean number of topics taught in home with their elementary school aged child was 6 ($x = 6.42$, $sd = 3.79$) and for mothers, the mean number of topics taught in home with their elementary school aged child was 8 of the 13 topics ($x = 8.48$, $sd = 3.08$). Indicating that mothers perceived more sexuality topics would be discussed with their elementary school aged child at home as compared to fathers.

Table 8

Sexuality Topics Parents of Elementary School Children Plan to Discuss with Their Children

Items	*Total n (%)				
Content Topics:	Grade Span				
	K-2	3-5	6-8	9-12	Would not teach at Home
Friendship	98 (67%)	33 (23%)	12 (8%)	0 (0%)	3 (2%)
Bullying prevention	96 (65%)	41 (28%)	8 (5%)	0 (0%)	2 (1%)
Healthy relationships	76 (52%)	46 (31%)	17 (12%)	5 (3%)	3 (2%)
Sexual abuse prevention	73 (51%)	33 (23%)	28 (19%)	8 (6%)	2 (1%)
Proper names for body parts (including male and female anatomy)	64 (44%)	53 (36%)	21 (14%)	6 (4%)	3 (2%)
Gender roles (how society may expect boys and girls to act)	51 (35%)	49 (34%)	22 (15%)	5 (3%)	18 (12%)
Different kinds of families	47 (32%)	51 (35%)	35 (24%)	6 (4%)	8 (5%)
Define sexual orientation	13 (9%)	46 (32%)	56 (38%)	15 (10%)	16 (11%)
Male and female reproductive system	11 (8%)	59 (40%)	60 (41%)	12 (8%)	5 (3%)
Puberty	8 (5%)	71 (48%)	61 (41%)	7 (5%)	1 (1%)
Reproduction	8 (5%)	47 (32%)	70 (47%)	19 (13%)	4 (3%)
HIV/STD prevention	2 (1%)	24 (16%)	84 (57%)	34 (23%)	3 (2%)
Pregnancy prevention	0 (0%)	22 (15%)	89 (61%)	32 (21%)	4 (3%)
*n=153, percent's may not add up to 100% due to rounding up each percentage					

In addition thirteen chi-square analyses were calculated to determine if there were any differences between mothers and fathers regarding when they planned to discuss specific sexuality topics at home. Four chi-square analyses showed statistical significant difference between mothers and fathers for the topics of reproduction, puberty, healthy relationships, and bullying prevention. A statistically significant difference was found between mothers and fathers regarding when they plan to discuss reproduction with their children ($\chi^2 = 8.22$, $df=2$, $p = .02$). Mothers thought reproduction should be discussed with their children when he/she is in K-5th grades (72%) compared to fathers (28%). Another statistically significant difference was found between mothers and fathers regarding when they plan to discuss puberty with their children ($\chi^2 = 12.68$, $df=2$, $p = .002$). Mothers thought puberty should be discussed with their child when he/she is in K-5th grades (70%) compared to fathers (30%). A statistically significant difference was also found between mothers and fathers regarding when they plan to discuss healthy relationships with their children ($\chi^2 = 11.45$, $df=2$, $p = .003$). Mothers thought healthy relationships should be discussed with their child when he/she is in K-5th grades (65%) compared to fathers (34%). The last statistically significant difference was found between mothers and fathers regarding when they planned to discuss bullying prevention with their children ($\chi^2 = 9.56$, $df=2$, $p = .01$). Mothers thought bullying prevention should be discussed with their children when in K-5th grades (67%) compared to fathers (33%).

Variables That Predict Support for Teaching Sexuality Education Topics in Elementary Schools

A bivariate analysis was conducted to determine what variables predicted support for teaching a high number of sexuality topics (7-13) in elementary schools (Table 9).

Predictors examined included parent sex, sensation seeking scale, having older children in the family, and if sexuality education topics were taught at home. Findings indicated a statistically significant association between the high numbers of sexuality topics taught at home and support for number of sexuality education topics taught in the elementary schools. The odds of supporting a high number of sexuality education topics taught in school increased if parents taught a high number of sexuality topics at home (OR= 18.74; 95% CI = 5.56-59.92) compared to who taught a few number of topics at home. There was no significant association between support for teaching a high number of sexuality topics in school and parents gender (OR=1.69; 95% CI = 0.77-3.74), level of sensation seeking of child (OR= 2.04; 95% CI = 0.70-5.93), or having an older child (OR= 2.04; 95% CI = 0.86-4.79).

Testing the Research Questions and Hypotheses

The research questions and hypotheses that were stated in Chapter 1 are answered in this section of the results as they relate to the final data analyses.

Research Question 1: What grades do parents/caregivers of elementary school children think selected sexual health education topics should begin being taught at school?

Hypotheses 1.1: All of the parents/caregivers of elementary school children will perceive that all of the sexual health education topics should begin being taught in the K-5th grades.

Table 9

Logistic Regression Predicting Support for Topics Being Taught in Elementary School, controlling for Background Variables

Topics	High Support (7-13) for Teaching Sexuality Education Topics in Elementary School (N=70)
Odds Ratio (95% CI)	
Parent Gender	
Females	1.0 (Ref)
Males	0.59 (0.27-1.30)
Sensation Seeking Status of Child	
Low Sensation Seeking Status of Child	1.0 (Ref)
High Sensation Seeking Status of Child	2.04 (0.70-5.93)
Older Children in Family	
No Older Children (under 13 years old)	1.0 (Ref)
Older Children (between 13-18 years old)	2.04 (0.86-4.79)
Sexuality Education Topics Taught at Home	
Low Number of Topics Taught at Home (0-6 topics)	1.0 (Ref)
High Number of Topics Taught at Home (7-13 topics)	18.74 (5.86-59.92)*

*P <.001

Descriptive statistics were conducted to identify when parents believed selected topics should be taught in the schools. Table 2 includes a summary of each content topic (n=13) along with the grade spans (K-2, 3-5, 6-8, 9-12, or not at all). A majority of parents believed that six of the thirteen topics should begin being taught in the elementary school grades (K-5th) as compared to being taught in 6-8, 9-12, or not at all. Those eight topics include: bullying prevention (90%), friendship (86%), healthy relationships (75%), proper names for body parts (64%), different kinds of families (58%), and sexual abuse prevention (57%). Therefore, the null hypothesis was rejected.

Research Question 2: Do parents/caregivers with high sensation seeking children believe sexual health topics should be taught earlier than parents/caregivers with low sensation seeking children?

Hypothesis 2.1: There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think proper names for body parts should begin being taught at school.

A chi square test was conducted ($\chi^2 = 2.19$, $df = 2$, $p = .33$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.2 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think the male and female reproductive system should begin being taught at school.

A chi square test was conducted ($\chi^2 = 3.49$, $df = 2$, $p = .18$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.3 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think gender roles should begin being taught at school.

A chi square test was conducted ($\chi^2 = 4.37$, $df = 2$, $p = .11$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.4 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think sexual orientation should begin being taught at school.

A chi square test was conducted ($\chi^2 = 12.61$, $df = 2$, $p = .002$) and a statistically significant difference was found. Parents who had a low sensation seeking child thought sexual orientation should be taught in K-5th grades (19%), 6-8th grades (56%), and 9-12th grades (24%). Parents that had a high sensation seeking child thought sexual orientation should be taught in K-5th grades (58%), 6-8th grades (37%), and 9-12th grade (4%). The null hypothesis was rejected.

Hypothesis 2.5 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think reproduction should begin being taught at school.

A chi square test was conducted ($\chi^2=5.51$, $df = 2$, $p = .06$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.6 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children regarding when puberty should begin being taught at school.

A chi square test was conducted ($\chi^2= 4.66$, $df = 2$, $p = .10$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.7 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think the topic of different kinds of families should begin being taught at school.

A chi square test was conducted ($\chi^2= 7.08$, $df = 2$, $p = .03$) and a statistically significant difference was found. Parents who have a low sensation seeking child thought different kinds of families should be taught in K-5th grades (65%), 6-8th grades (27%), and 9-12th grades (8%). Parents who have a high sensation seeking child thought different kinds of families should be taught in K-5th grades (95%) and 6-8th grades (5%). The null hypothesis was rejected.

Hypothesis 2.8 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think characteristics of a friend should begin being taught at school.

A chi square test was conducted ($\chi^2 = .188$, $df = 2$, $p = .91$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.9 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think characteristics of healthy relationships should begin being taught at school.

A chi square test was conducted ($\chi^2 = 4.94$, $df = 2$, $p = .09$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.10 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think bullying prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 2.26$, $df = 2$, $p = .32$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.11 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think sexual abuse prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 5.42$, $df = 2$, $p = .07$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.12 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus

parents/caregivers of low sensation seeking elementary school children in regards to when they think HIV prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 3.49$, $df = 2$, $p = .18$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 2.13 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think pregnancy prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 4.03$, $df = 2$, $p = .13$) and no statistically significant difference was found. The null hypothesis was accepted.

Research Question 3: What grade do parents/caregivers of elementary school children believe select skills (analyzing influences, accessing information, interpersonal communication, self-management, and advocacy) should be taught in school?

Hypotheses 3.1: All of the parents/caregivers of elementary school children will perceive that sexuality education skills should begin being taught in K-5th grades.

Descriptive statistics were calculated to identify when parents believe selected skills related to sex education should be taught in the schools. Table 3 shows a breakdown of each skill along with the grade span that parents could select from. The majority of the parents believed that four of the five skills should begin being taught in the elementary school grades (K-5th). The topics and the percentage of the parents that support these skills being taught in elementary school include:

communication (81%), advocacy (72%), analyze influences (63%), and access information (62%). The null hypothesis was rejected.

Research Question 4: What are the differences in number of perceived barriers regarding teaching sexual health education in elementary school?

Hypothesis 4.1: There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the parent's/caregiver's gender.

An independent samples t-test was calculated and no statistical difference was found between parents gender and the number of perceived barriers regarding teaching sex education in schools ($t = -1.25$, $df = 150$, $p = .22$). The null hypothesis was accepted.

Hypothesis 4.2 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on household income.

An ANOVA was calculated for this hypothesis. No significant difference was found between parent's household income level and number of perceived barriers to teaching sexual health in schools ($F = .22$, $df = 3$, $p = .89$). The null hypothesis was accepted.

Hypothesis 4.3 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the education level of the parent/caregiver.

An ANOVA was calculated for this hypothesis. No significant difference was found between parent's education level and number of perceived barriers to teaching sexual health in schools ($F= 1.17$, $df= 4$, $p= .33$). The null hypothesis was accepted.

Hypothesis 4.4 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on his/her race/ethnicity.

An ANOVA was calculated for this hypothesis. No significant difference was found between parent's race/ethnicity and number of perceived barriers to teaching sexual health in schools ($F= .43$, $df= 4$, $p= .79$). The null hypothesis was accepted.

Hypothesis 4.5 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on political party affiliation.

An ANOVA was calculated for this hypothesis. It was found that there was no significant difference by parent's political party affiliation and number of perceived barriers to implementing sex education in the schools ($F= 1.75$, $df= 4$, $p= .56$). The null hypothesis was accepted.

Hypothesis 4.6 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on religious affiliation.

An ANOVA was calculated for this hypothesis. No significant difference was found between parent's religious affiliation and number of perceived barriers to

teaching sexual health in schools ($F = .73$, $df = 6$, $p = .63$). The null hypothesis was accepted.

Hypothesis 4.7- There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on family structure.

An ANOVA was calculated for this hypothesis. No significant difference was found between the type of family structure and number of perceived barriers to teaching sexual health in schools ($F = 1.70$, $df = 6$, $p = .63$). The null hypothesis was accepted.

Hypothesis 4.8 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on type of school their child attends.

An ANOVA was calculated for this hypothesis. It was found that there was a significant difference based on the type of school their child attended and perceived barriers to implementing sex education in the schools ($F = 3.44$, $df = 2$, $p = .04$). A post hoc analysis showed there was a significant difference between parents whose children attended public schools ($\bar{x} = 2.47$, $sd = 1.53$) and children that were homeschooled ($\bar{x} = 0.50$, $sd = 0.58$) in regards to number of perceived barriers to implementing sexuality education at their schools ($p < .04$). The null hypothesis was rejected.

Hypothesis 4.9 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on geographic location.

An ANOVA was calculated for this hypothesis. No significant difference was found between the parents' geographic location and number of perceived barriers to teaching sexual health in schools ($F= 1.49$, $df= 3$, $p= .22$). The null hypothesis was accepted.

Hypothesis 4.10 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the age of the parent/caregiver.

A Pearson product moment correlation ($r = -0.09$, $p = .29$) was run and no statistically significant relationship was found between number of perceived barriers and the age of the parent/caregiver. The null hypothesis was accepted.

Hypothesis 4.11 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on how often their child attends faith based services.

An ANOVA was calculated for this hypothesis. It was found that there was no significant difference by the amount of time the child spends attending faith based services and perceived barriers to implementing sex education in the schools ($F= .80$, $df= 4$, $p= .53$). The null hypothesis was accepted.

Hypothesis 4.12 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on if they have older children (middle/high school).

An independent samples t-test was calculated and no statistical differences was found between parents that have an older child (12-18 years old) versus those who

do not and the number of perceived barriers regarding teaching sex education in schools ($t = -.12$, $df = 150$, $p = .91$). The null hypothesis was accepted.

Hypothesis 4.13 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on if their child is a high sensation seeker versus a low sensation seeker.

An independent samples t-test was calculated and no statistically significant differences was found between parents that had a high sensation seeker child versus a low sensation seeker child and the number of perceived barriers regarding teaching sex education in schools ($t = -1.44$, $df = 148$, $p = .15$). The null hypothesis was accepted.

Research Question 5: What are the differences in number of perceived benefits to teaching sexual health in elementary schools?

Hypothesis 5.1: There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on the parent's/caregiver's gender.

An independent samples t-test was calculated and a statistical difference was found between parents gender and the number of perceived benefits regarding teaching sex education in schools ($t = -2.21$, $df = 152$, $p = .03$). For fathers, the mean number of benefits was ($x = 4.40$, $sd = 2.36$) and for mothers, the mean number of benefits was ($x = 5.22$, $sd = 2.23$). This indicates that mothers perceive a larger number of benefits than fathers. The null hypothesis was rejected.

Hypothesis 5.2 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on household income.

An ANOVA was calculated for this hypothesis. It was found that there was no statistically significant difference by parent's household income and number of perceived benefits to implementing sex education in the schools ($F = .88$, $df = 3$, $p = .45$). The null hypothesis was accepted.

Hypothesis 5.3 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on the parent's /caregiver's race/ethnicity.

An ANOVA was calculated for this hypothesis. It was found to be not statistically significant ($F = 1.37$, $df = 4$, $p = .25$). The null hypothesis was accepted.

Hypothesis 5.4 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education among parents/caregivers of elementary school children based on the education level.

An ANOVA was calculated for this hypothesis. It was found to be not statistically significant ($F = 1.72$, $df = 4$, $p = .15$). The null hypothesis was accepted.

Hypothesis 5.5 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education among parents/caregivers of elementary school children based on political party affiliation.

An ANOVA was calculated for this hypothesis. It was found that there was no statistically significant difference by parent's political party affiliation ($F = 2.51$, $df = 4$, $p = .04$). The null hypothesis was rejected.

Hypothesis 5.6 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on their religious affiliation.

An ANOVA was calculated for this hypothesis. It was found to be not statistically significant ($F = .68$, $df = 6$, $p = .67$). The null hypothesis was accepted.

Hypothesis 5.7 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education to teaching sexuality education between parents/caregivers of elementary school children based on family structure.

An ANOVA was calculated for this hypothesis. It was found to be not statistically significant ($F = 2.15$, $df = 4$, $p = .08$). The null hypothesis was accepted.

Hypothesis 5.8 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on type of school their child attends.

An ANOVA was calculated for this hypothesis. It was found to be statistically significant ($F = 3.65$, $df = 2$, $p = .03$). A post-hoc analysis showed a statistical difference between children who attended public schools and children who were homeschooled ($p < .04$). The null hypothesis was rejected.

Hypothesis 5.9 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on geographic location.

An ANOVA was calculated for this hypothesis. It was found to be not statistically significant ($F = 2.36$, $df = 3$, $p = .08$). The null hypothesis was accepted.

Hypothesis 5.10 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on the age of the parent/caregiver.

A Pearson product moment correlation ($r = -.01$, $p = .94$) was calculated and no statistically significant relationship was found between number of perceived benefits and the age of the parent/caregiver. The null hypothesis was accepted.

Hypothesis 5.11 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on how often their child attends faith based services.

An ANOVA was calculated for this hypothesis. It was found that there was a statistically significant difference by the amount of time the child spends attending faith based services and perceived benefits to implementing sex education in the schools ($F = 2.55$, $df = 4$, $p = .04$). A post hoc analysis showed no significant difference among parents whose children attended religious services for various frequencies. The null hypothesis was rejected.

Hypothesis 5.12 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on if they have older children (middle/high school).

An independent samples t-test was calculated and no statistically significant difference was found between parents that have an older child (12-18 years old) and those who did not and the number of perceived benefits regarding teaching sex education in schools ($t = -.210$, $df = 152$, $p = .83$). The null hypothesis was accepted.

Hypothesis 5.13 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on if their child is a high sensation seeker versus a low/moderate sensation seeker.

An independent samples t-test was calculated and no statistically significant difference was found between parents that had a high sensation seeking child versus a low sensation seeking child and the number of perceived benefits regarding teaching sex education in schools ($t = -.74$, $df = 149$, $p = .46$). The null hypothesis was accepted.

Research Question 6: Who should make the final decision on what sexual health topics are taught in public schools?

Hypotheses 6.1: All of the parents/caregivers of elementary school children will perceive that parents should be the ones who should decide what sexual health education topics are taught.

Descriptive statistics were conducted to identify who parents think should make the final decision on what sexual health topics are taught in public schools. Table 7 provides a list of nine people who might be considered to make the final decision regarding sexuality education topics being taught in school. There was also a section for the respondent to add other people who might not be identified on the provided list. The majority (86%) of the parents believed they should be the ones to make the final decision on what sex education topics should be taught. The null hypothesis was rejected.

Research Question 7: What sexual health topics do parents/caregivers of elementary school children discuss with their child and when do they think they will teach the various sexual health topics?

Hypotheses 7.1: All of the parents/caregivers of elementary school children will perceive that all of the sexual health topics will be discussed with their elementary child.

Descriptive statistics were conducted to identify how many of the parents/caregivers believe that all of the sexuality education topics should be taught at home with their elementary child. Frequencies show that 10% of the parents believe that all 13 sexuality education topics should be taught at home when their children are in elementary school (K-5th grades). Therefore, the null hypothesis was rejected.

Hypotheses 7.2: All of the parents/caregivers of elementary school children will perceive that sexual health topics should begin being discussed when their child is in K-5th grades.

Descriptive statistics were conducted to identify when they will teach the various sexual health topics. Table 8 includes a summary of each content topic (n=13) along with the grade span (k-2, 3-5, 6-8, 9-12, or not at all) that parents could select from. A majority of the parents believed that seven of the thirteen topics should begin being taught in the elementary school grades (k-5th). Those seven topics include: bullying prevention (93%), friendship (90%), healthy relationships (83%), proper names for body parts (80%), sexual abuse prevention (74%), different kinds of families (67%), and puberty (53%). Therefore, the null hypothesis was rejected.

Research Question 8: Does parent gender influence how well parents think they have communicated with their child about sexuality issues?

Hypotheses 8.1: There is no significant difference between mothers and fathers regarding how well they have communicated with their child.

A chi square test was conducted ($\chi^2 = 9.32$, $df = 3$, $p = .03$) and a statistically significant difference was found. Mothers were more likely to report excellent communication skills (32%) compared to fathers (11%). Therefore, the null hypothesis was rejected.

Research Question 9: Do mothers believe sexual health topics should be taught earlier than fathers?

Hypothesis 9.1: There is no statistically significant difference between parent's sex and when they think proper names for body parts should begin being taught at school.

A chi square test was conducted ($\chi^2 = 5.01$, $df = 2$, $p = .08$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.2 - There is no statistically significant difference between parent's sex and when they think the male and female reproductive system should begin being taught at school.

A chi square test was conducted ($\chi^2 = 4.88$, $df = 2$, $p = .09$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.3 - There is no statistically significant difference between parent's sex and when they think gender roles should begin being taught at school.

A chi square test was conducted ($\chi^2 = 5.01$, $df = 2$, $p = .08$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.4 - There is no statistically significant difference between parent's sex and when they think sexual orientation should begin being taught at school.

A chi square test was conducted ($\chi^2 = 3.95$, $df = 2$, $p = .14$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.5 - There is no statistically significant difference between parent's sex and when they think reproduction should begin being taught at school.

A chi square test was conducted ($\chi^2 = 8.22$, $df = 2$, $p = .02$) and a statistically significant difference was found. Mothers were more likely to think that reproduction should be discussed when their child is in K-5th grades (72%) compared to fathers (28%). The null hypothesis was rejected.

Hypothesis 9.6 - There is no statistically significant difference between parent's sex and when puberty should begin being taught at school.

A chi square test was conducted ($\chi^2 = 12.68$, $df = 2$, $p = .002$) and a statistically significant difference was found. Mothers were more likely to think that puberty should be discussed when their child is in K-5th grades (70%) compared to fathers (30%). The null hypothesis was rejected.

Hypothesis 9.7 - There is no statistically significant difference between parent's sex and when they think different kinds of families should begin being taught at school.

A chi square test was conducted ($\chi^2 = 4.89$, $df = 2$, $p = .09$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.8 - There is no statistically significant difference between parent's sex and when they think characteristics of a friend should begin being taught at school based.

A chi square test was conducted ($\chi^2 = 1.86$, $df = 2$, $p = .17$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.9 - There is no statistically significant difference between parent's sex and when they think characteristics of healthy relationships should begin being taught at school.

A chi square test was conducted ($\chi^2 = 11.45$, $df = 2$, $p = .003$) and a statistically significant difference was found. Mothers were more likely to think that healthy relationships should be discussed when their child is in K-5th grades (65%) compared to fathers (35%). The null hypothesis was rejected.

Hypothesis 9.10 - There is no statistically significant difference between parent's sex and when they think bullying prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 7.68$, $df = 1$, $p = .01$) and a statistically significant difference was found. Mothers were more likely to think that bullying prevention should be discussed when their child is in K-5th grades (62%) compared to fathers (38%). The null hypothesis was rejected.

Hypothesis 9.11 - There is no statistically significant difference between parent's sex and when they think sexual abuse prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 9.56$, $df = 2$, $p = .01$) and a statistically significant difference was found. Mothers were more likely to think that sexual abuse prevention should be discussed when their child is in K-5th grades (67%) compared to fathers (33%). The null hypothesis was rejected.

Hypothesis 9.12 - There is no statistically significant difference between parent's sex and when they think HIV prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 1.87$, $df = 2$, $p = .40$) and no statistically significant difference was found. The null hypothesis was accepted.

Hypothesis 9.13 - There is no statistically significant difference between parent's sex and when they think pregnancy prevention should begin being taught at school.

A chi square test was conducted ($\chi^2 = 2.87$, $df = 2$, $p = .24$) and no statistically significant difference was found. The null hypothesis was accepted.

Research Question 10: Do parents perceptions of how many sexuality topics should be taught in elementary school differ by select demographic/background variables?

Hypothesis 10.1: All of the listed independent variables will predict a significant amount of the variance of parent's support for teaching a high number (7-13) of sexuality education topics in school.

- Parent sex
- Sensation seeking child
- If they have an older child

- If they support a high (7-13) number of sexuality topics taught at home.

A bivariate regression was calculated to determine if all the predictor variables for the support of teaching a high number of sexuality education topics in elementary school, the only predictor was if the parent had high support for teaching sexuality education topics at home (OR= 18.74; 95% CI= 5.56-59.92). No other variables were significant. Therefore, the null hypothesis was rejected.

Summary

The majority (92%) of parents who have an elementary age child believe that age appropriate sexuality education should be taught in the schools with the majority (90%) believing that sexual health education should start in the elementary and middle school years. A majority of parents selected K-5th grades as being the appropriate grade to teach sexuality education for 6 of the 13 identified topics.

Potential barriers and benefits to teaching sexuality education in elementary schools were identified by parents. The top two barriers perceived by parents was that parents don't want it taught in schools (80%) and that teachers are not at ease teaching it (48%). When asked about benefits, the top two responses included: students will learn how to prevent or respond to sexual abuse (79%) and students will be prepared to make informed healthy decisions (78%).

Parents were also asked to identify who should make the final decisions on which sexual health education topics are taught in schools. The majority of the respondents chose themselves (86%) as being the number one response followed by health teachers (45%).

Twenty percent of parents reported not talking at all with their children about sexual health issues. However, the majority (62%) of parents believed they had done a good/excellent job communicating with their child about sexual health issues. Parents were also asked when they planned to communicate with their child about selected sexual health topics. The majority of the parents identified that 7 of the 13 topics would be discussed with their children during the K-5th elementary school grades. This research also identified that mothers approve of four of these topics being taught earlier than fathers.

Chapter Five

Conclusions

This chapter contains the following sections: Summary of Research Questions, Accepted Hypotheses, Rejected Hypotheses, Discussion, Recommendations for Future Research and Recommendations to the Health Profession.

Summary of Research Questions

This study was conducted to answer the following questions:

1. Determine what grade parents/caregivers of elementary school children think selected sexual health education topics should begin being taught at school.
2. Examine if parents/caregivers with high sensation seeking children believe sexual health topics should be taught earlier than parents/caregivers with low sensation seeking children.
3. Determine what grade parents/caregivers of elementary school children think selected sexual health education skills (analyzing influences, accessing information, interpersonal communication, self-management, and advocacy) should begin being taught at school.
4. Determine the differences in number of perceived barriers regarding teaching sexual health education in elementary school.
5. Determine the differences in number of perceived benefits to teaching sexual health in elementary schools.
6. Determine who should make the final decision on what sexual health topics are taught in public schools.

7. Examine what sexual health topics do parents/caregivers of elementary school children discuss with their child and when do they think they will teach the various health topics.
8. Determine if parent sex influences how well parents think they have communicated with their child about sexuality issues.
9. Determine if mothers believe sexual health topics should be taught earlier than fathers.
10. Examine what variables impact the support of teaching sexuality education in elementary schools.

A 23- item closed format questionnaire was used to assess the perceptions of parents across the United States that had an elementary school age child regarding sexual health education topics taught at school and at home. The questionnaire was developed using the Health Belief Model constructs: perceived benefits and perceived barriers. The questionnaire also included questions about demographic and background characteristics including: sex, age, race/ethnicity, highest grade or level of education, household income, the type of school the child attends (public, private, homeschool), where they live (rural, suburban, urban), political party, religious preference, how often the child attends religious services, the family structure, and the region they live in. The response format used for the questionnaire items included a five-point Likert-type scale (K-2, 3-5, 6-8, 9-12, or not at all), a four-point Likert-type scale (strongly agree-strongly disagree) multiple choice items, and check all that apply items.

The survey was sent through the postal mail to a national sample of 800 parents that had an elementary age child at the time the questionnaire was administered. A three wave mailing was used to maximize the return rate. The final tally included: 117 parents who did not have an elementary school age child and 53 of the surveys were sent back as undeliverable. Out of the sample size of 630, a total of 153 responded for a response rate of 24%.

Most parents were white (86%), females (58%), that lived in suburban areas (63%), where the child attended a public school (82%) and lived with both birth parents (78%). A majority (92%) of the parents believed that age appropriate sex education should be taught in schools. Of those parents, 48% said sex education should start in 6-8th grades followed by 42% that reported k-5th grades. When parents were asked how well they communicated with their children regarding sexual health topics approximately two-thirds (62%) reported they communicated good or excellently.

There were fifty-nine hypotheses for this study. The following forty were accepted and the other nineteen were rejected.

Accepted Hypotheses

Hypothesis 2.1: There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think proper names for body parts should begin being taught at school.

Hypothesis 2.2 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus

parents/caregivers of low sensation seeking elementary school children in regards to when they think the male and female reproductive system should begin being taught at school.

Hypothesis 2.3 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think gender roles should begin being taught at school.

Hypothesis 2.5 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think reproduction should begin being taught at school.

Hypothesis 2.6 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children regarding when puberty should begin being taught at school.

Hypothesis 2.8 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think characteristics of a friend should begin being taught at school.

Hypothesis 2.9 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to

when they think characteristics of healthy relationships should begin being taught at school.

Hypothesis 2.10 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think bullying prevention should begin being taught at school.

Hypothesis 2.11 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think sexual abuse prevention should begin being taught at school.

Hypothesis 2.12 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think HIV prevention should begin being taught at school.

Hypothesis 2.13 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think pregnancy prevention should begin being taught at school

Hypothesis 4.1: There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the parent's/caregiver's gender.

Hypothesis 4.2 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on household income.

Hypothesis 4.3 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the education level of the parent/caregiver.

Hypothesis 4.4 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on his/her race/ethnicity.

Hypothesis 4.5 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on political party affiliation.

Hypothesis 4.6 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on religious affiliation.

Hypothesis 4.7- There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on family structure.

Hypothesis 4.9 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on geographic location.

Hypothesis 4.10 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on the age of the parent/caregiver.

Hypothesis 4.11 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on how often their child attends faith based services.

Hypothesis 4.12 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on if they have older children (middle/high school).

Hypothesis 4.13 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on if their child is a high sensation seeker versus a low sensation seeker.

Hypothesis 5.2 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on household income.

Hypothesis 5.3 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on the parent's /caregiver's race/ethnicity.

Hypothesis 5.4 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education among parents/caregivers of elementary school children based on the education level.

Hypothesis 5.6 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on their religious affiliation.

Hypothesis 5.7 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education to teaching sexuality education between parents/caregivers of elementary school children based on family structure.

Hypothesis 5.9 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on geographic location.

Hypothesis 5.10 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on the age of the parent/caregiver.

Hypothesis 5.12 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on if they have older children (middle/high school).

Hypothesis 5.13 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on if their child is a high sensation seeker versus a low/moderate sensation seeker.

Hypothesis 9.1: There is no statistically significant difference between parent's sex and when they think proper names for body parts should begin being taught at school.

Hypothesis 9.2 - There is no statistically significant difference between parent's sex and when they think the male and female reproductive system should begin being taught at school.

Hypothesis 9.3 - There is no statistically significant difference between parent's sex and when they think gender roles should begin being taught at school.

Hypothesis 9.4 - There is no statistically significant difference between parent's sex and when they think sexual orientation should begin being taught at school.

Hypothesis 9.7 - There is no statistically significant difference between parent's sex and when they think different kinds of families should begin being taught at school.

Hypothesis 9.8 - There is no statistically significant difference between parent's sex and when they think characteristics of a friend should begin being taught at school based.

Hypothesis 9.12 - There is no statistically significant difference between parent's sex and when they think HIV prevention should begin being taught at school.

Hypothesis 9.13 - There is no statistically significant difference between parent's sex and when they think pregnancy prevention should begin being taught at school.

Rejected Hypotheses

Hypotheses 1.1: All of the parents/caregivers of elementary school children will perceive that all of the sexual health education topics should begin being taught in the K-5th grades.

Hypothesis 2.4 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think sexual orientation should begin being taught at school.

Hypothesis 2.7 - There is no statistically significant difference between parents/caregivers of high sensation seeking elementary school children versus parents/caregivers of low sensation seeking elementary school children in regards to when they think the topic of different kinds of families should begin being taught at school.

Hypotheses 3.1: All of the parents/caregivers of elementary school children will perceive that sexuality education skills should begin being taught in K-5th grades.

Hypothesis 4.8 - There is no statistically significant difference in the number of perceived barriers between parents/caregivers of elementary school children based on type of school their child attends.

Hypothesis 5.1: There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on the parent's/caregiver's gender.

Hypothesis 5.5 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education among parents/caregivers of elementary school children based on political party affiliation.

Hypothesis 5.8 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on type of school their child attends.

Hypothesis 5.11 - There is no statistically significant difference in the number of perceived benefits to teaching sexuality education between parents/caregivers of elementary school children based on how often their child attends faith based services.

Hypotheses 6.1: All of the parents/caregivers of elementary school children will perceive that parents should be the ones who should decide what sexual health education topics are taught.

Hypotheses 7.1: All of the parents/caregivers of elementary school children will perceive that all of the sexual health topics will be discussed with their elementary child.

Hypotheses 7.2: All of the parents/caregivers of elementary school children will perceive that sexual health topics should begin being discussed when their child is in K-5th grades.

Hypotheses 8.1: There is no significant difference between mothers and fathers regarding how well they have communicated with their child.

Hypothesis 9.5 - There is no statistically significant difference between parent's sex and when they think reproduction should begin being taught at school.

Hypothesis 9.6 - There is no statistically significant difference between parent's sex and when puberty should begin being taught at school.

Hypothesis 9.9 - There is no statistically significant difference between parent's sex and when they think characteristics of healthy relationships should begin being taught at school.

Hypothesis 9.10 - There is no statistically significant difference between parent's sex and when they think bullying prevention should begin being taught at school.

Hypothesis 9.11 - There is no statistically significant difference between parent's sex and when they think sexual abuse prevention should begin being taught at school.

Hypothesis 10.1: All of the listed independent variables will predict a significant amount of the variance of parent's support for teaching a high number (7-13) of sexuality education topics in school.

Discussion

To date, this is the first national study to assess parents of elementary school children regarding when selected sexuality education topics should be taught in school. This study adds to the existing evidence that parents are supportive of sexuality education being taught in schools. This study found that slightly more than nine out of ten (92%) parents of elementary school children support age appropriate sexuality education being taught in schools. This result is similar to previous studies that have also shown parents of older children being supportive of a more comprehensive sexuality education program being taught in schools (Barr, et al., 2014; Bleakley, et al., 2010; Constantine, et al., 2007; Dake, et al., 2014; Eisenberg, et al., 2008; Ito, et al., 2006; Kaiser Family Foundation, 2000; Tortolero SR.; Johnson K; Peskin M, 2011). This study further

examined when sexuality education programs should begin being taught; the results were divided between 6th-8th grades (48%) followed by K-5th grades (42%). However, when parents were asked when they believed selected sexuality education topics should be taught the majority responded K-5th grades. This study identified that parents might have a different perspective on what sexuality education topics should be taught in elementary grades as compared to the National Sexuality Education Standards.

The results of this study are consistent with many of the National Sexuality Education Standards (NSES) which recommend that sexual health information be taught in the elementary school grades. Content identified in the standards for K-5th grades were used in this study to see if parents agreed with those standards being taught in the elementary school curriculum. A majority of the parents responded that half of the topics should begin being taught in the elementary school grades. Those topics included: bullying prevention (90%), friendship (86%), healthy relationships (75%), proper names for body parts (64%), different kinds of families (58%), and sexual abuse prevention (57%). The information from this study indicates that parents do not support all of the topics that are recommended to be taught in the elementary grades as selected by the NSES committee. Topics where the majority of the parents did not select K-5th grades include the following topics: HIV/STD information, male and female reproductive system, puberty, define sexual orientation, gender roles. However, it is important to recognize that this study used key terms to represent the more descriptive benchmarks identified in the NSES (Future of Sex Education Initiative, 2012). For example, the survey asked when parents believe the subject of “puberty” should be taught; however, the standards say “explain the physical, social and emotional changes that occur during

puberty and adolescence.” This is important to consider because the standards provide more description for each content area that could have changed the parents’ responses.

The NSES also incorporates the National Health Education Standards (NHES). Five of the eight NHES are identified in the NSES at the elementary grade level benchmarks. A majority of the parents were supportive of four of these five identified skills being taught in the elementary school grades (K-5th grades): communication (81%), advocacy (72%), analyze influences (63%), and accessing information (62%). These responses indicate the support for the inclusion of these skills being taught in elementary schools. Similar to the key terms mentioned above, it is important to recognize that this study used key terms to represent each skill as well as provided a few examples of each of those skills that are recommended to be taught in the K-5th grades (Future of Sex Education Initiative, 2012). This information provides school officials with insight on how parents might feel if the school district implements the NHES. It would be very important for school officials to get parent support prior to implementing these NHES.

Another unique aspect of this study is the use of the Brief Sensation Seeking Scale (BSSS-4). Recent literature has supported the use of the BSSS-4 in regards to risky health behaviors. However, all of those studies required the participant to report their own beliefs (Khurana, et al., 2012; Romer & Hennessy, 2007; Stephenson, et al., 2003; Vallone, et al., 2007). This study examined parents’ perceptions of their child engaging in the BSSS-4 items. The validity and reliability of this scale were tested and produced good results. Statistical differences were found between parents with high versus low sensation seeking children regarding when sexual orientation and different kinds of families should be taught in school. These results support the idea that parents, who

believe their children are high sensation seekers, prefer some sexuality education topics to be taught at an earlier grade level than those parents who identified their children as low sensation seekers.

Teaching sexuality education in schools is a sensitive topic area. Parents surveyed in this study were asked to identify what challenges there are to teaching sexuality education in elementary schools (K-5th grades). The largest perceived barrier by the parents surveyed to implementing sexuality education in schools was that they thought some parents wouldn't want it taught in elementary schools (80%). However, existing literature and this study, indicates that between 79-93% (depending on the study) of parents are supportive of sexuality education being taught in elementary and middle school grades (Barr, et al., 2014; Dake, et al., 2014; Eisenberg, et al., 2008; Ito, et al., 2006; Jordan, et al., 2000; Tortolero SR.; Johnson K; Peskin M, 2011). The most recent study conducted in 2014, identified five topics that parents were supportive of teaching in elementary schools: communication (89%), anatomy (65%), abstinence (61%), HIV (53%), gender and sexual orientation issues (52%) (Barr, et al., 2014). These results indicated that while parents perceive that parents are a top barrier to implementing sexuality education in the elementary schools, the literature shows the majority of parents are supportive of sexuality education topics being taught in elementary schools. Thus, parents seem to grossly underestimate the support for addressing this issue. Therefore, it is necessary to educate parents about these misperceptions.

Parents surveyed in this study were also asked to identify what benefits there were to teaching sexuality education in elementary schools (K-5th grades). The top benefits for teaching sexuality education in elementary schools, as indicated by parents in this study,

included: how to prevent or respond to sexual abuse (79%), make informed healthy decisions (78%), and learn about their own bodies (73%). The current study was the first study to specifically focus on benefits of teaching sexuality education in elementary schools. Constantine and colleagues (2007), conducted a similar study, assessing parental support, and found that the following were very important benefits for teaching sex education in the middle school grades: avoiding pregnancy and STDs (93%), avoiding sexual intercourse (85%), developing healthy and positive attitudes (77%), having healthy relationships (75%), and avoiding relationships (48%) These findings suggest that parents see the merit in implementing sexuality education at the elementary school grades and how it positively impacts their child's growth and development.

Parents surveyed in this study believed that they (86%) are the ones who should make the final decision regarding what sexuality education topics are taught in schools. This result is similar to a study conducted in 2006, that found parents (96%) believed that they should be the ones to determine if sexuality education is taught in schools (Ito, et al., 2006). Advocates for implementing sexuality education in schools need to consider working with the students' parents to gain community support for teaching these topics in elementary schools.

Another aspect of this study was to determine if mothers believed their communication with their child was better than fathers in regards to discussing sexuality issues. The parents in this study reported that mothers (32%) perceived that they have done an excellent job communicating with their child about sexuality issues as compared to fathers (11%). This finding is similar to other studies that have shown that mothers talked to their children more than fathers regarding sexual issues (Rothman, et al., 2011;

E. K. Wilson & Koo, 2010). For health educators, this information provides useful information on who they could be targeting for health education initiatives. Educating parents, especially fathers, about how and why to communicate early with their children could lead to increases in parent-child communication.

Sexuality education topics parents plan to discuss with their children and when they plan to discuss the topics was also examined. Literature shows that parents who communicate with their children about sexuality education can impact the child's attitudes and behaviors regarding sexual issues. A majority of the parents in this study believed that they would discuss seven of the thirteen topics with their elementary school grade child. Those seven topics included: bullying prevention (93%), friendship (90%), healthy relationships (83%), proper names for body parts (80%), sexual abuse prevention (74%), different kinds of families (67%), and puberty (53%). However, this study indicated that mothers and fathers did not always agree on when these topics should be taught. Mothers indicated they would discuss a few of these topics earlier than fathers. This result is similar to other studies that have shown that mothers are more likely to talk to their children about sexual topics as compared to fathers (Kapungu et al., 2010; Rothman, Miller, Terpeluk, Glauber, & Randel, 2011; Walker, 2001; Ellen K. Wilson, Dalberth, Koo, & Gard, 2010).

It is encouraging to see that both mothers and fathers believe they will communicate with their children about these sexuality topics. Research shows that when parents communicate with their children that the children are more likely to have positive self-efficacy, later age of sexual initiation, use contraception, have greater negotiation skills, and communicate with partners (Crosby, et al., 2009; DiClemente, et al., 2001;

Hadley, et al., 2009; Hutchinson, 2002; Hutchinson, Jemmott, Jemmott, Braverman, & Fong, 2003; Jerman & Constantine, 2010; Kapungu, et al., 2010; Teitelman, et al., 2008).

This study provides valuable information regarding parents' opinions on sexuality education being taught in school and in the home. This study shows that parents are supportive of select sexuality education topics being taught earlier compared to other topics. Health Educators can use this information to collaborate with parents to advocate for sexuality education integrated into the K-12th grades curriculum. A possible issue regarding why parents might not be supportive of all these elementary sexuality education topics (as identified by the National Sexuality Education Standards) could be due to the parents interpretation of what might be taught under each topic area. Health educators should continue to evaluate how parents define these terms, as well as, provide examples of the possible curriculum that would be taught under each topic.

The results of this inquiry also revealed the identification of the topics parents plan to discuss with their child. This finding is important because parent-child communication is an essential skill and that research has shown a positive impact communication has on the child's beliefs and behaviors. However, as mentioned previously parents might interpret these terms differently and it is not known what accurate or inaccurate information they might be sharing. Having a parent night to discuss how to communicate with their child about sexuality education could all be beneficial for educating parents. Health educators can assist parents by providing them with accurate knowledge and skills to properly communicate sexuality education topics with their children. Therefore, improving parent-child communication as well as increasing parent-child relationships.

Future Research Recommendations

Based on the findings of this research study the following future research recommendations are offered:

1. Additional research needs to be conducted regarding community (parent, school, and student) perceptions of the National Sexuality Education Standards.
2. Research needs to be conducted regarding how parents define sexuality education.
3. Research needs to be conducted regarding sensation seeking youth and the implementation of sexuality education at an earlier age.
4. Additional research needs to be conducted on early sexuality education communication between parents and children and the impact it has on those youth engaging in sexual behaviors.
5. Research needs to be conducted on differences between mothers and fathers communication on select sexuality education topics and the impact on their children's behaviors.

Recommendations to the Health Professionals

Based on the results of this study, there are several recommendations for health professionals.

1. Engage stakeholders (parents):
 - a. Increase parent involvement opportunities when selecting curriculum regarding sexuality education

- b. Incorporate parents perspectives into the creation of national sexuality education guidelines
 - c. Provide training and tools to help parents communicate with their children
- 2. Advocate for sexuality education
 - a. Establish comprehensive sexuality education requirements in elementary schools.
 - b. Promote the findings that parents are supportive of selected sexuality education topics being taught in elementary schools.

Summary:

This study provides valuable insight regarding parents' opinions about sexuality education being taught at school and at home. There are many ways that health educators can incorporate this information into public health strategies to improve the health and wellbeing of the community. The recommendations listed in the above sections are examples of what health educators could do to help improve this situation. Properly educating parents is the first step in getting parents to support this initiative of getting parents to communicate with their children about sexuality education topics as well as support of these topics being taught in schools.

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Appendix A

National Sexuality Education Standards (NSES)

Core Concepts CC	Analyzing Influences INF	Accessing Information AI	Interpersonal Communication IC	Decision-Making DM	Goal Setting GS	Self-Management SM	Advocacy ADV
PERSONAL SAFETY							
By the end of the 2 nd grade, students should be able to:	Explain that all people, including children, have the right to tell others not to touch their body when they do not want to be touched PS.2.CC.1	Identify parents and other trusted adults they can tell if they are feeling uncomfortable about being touched PS.2.AI.1	Demonstrate how to respond if someone is touching them in a way that makes them feel uncomfortable PS.2.IC.1			Demonstrate how to clearly say no, how to leave an uncomfortable situation, and how to identify and talk with a trusted adult if someone is touching them in a way that makes them feel uncomfortable PS.2.SM.1	
Explain what bullying and teasing are PS.2.CC.2							
Explain why bullying and teasing are wrong PS.2.CC.3	Identify parents and other trusted adults they can tell if they are being bullied or teased PS.2.AI.2	Demonstrate how to respond if someone is bullying or teasing them PS.2.IC.2					

GRADE 3-5							
Core Concepts CC	Analyzing Influences INF	Accessing Information AI	Interpersonal Communication IC	Decision-Making DM	Goal Setting GS	Self-Management SM	Advocacy ADV
ANATOMY & PHYSIOLOGY							
By the end of the 5 th grade, students should be able to:	Describe male and female reproductive systems including body parts and their functions AP.5.CC.1	Identify medically-accurate information about female and male reproductive anatomy AP.5.AI.1					
PUBERTY AND ADOLESCENT DEVELOPMENT							
By the end of the 5 th grade, students should be able to:	Explain the physical, social and emotional changes that occur during puberty and adolescence PD.5.CC.1	Describe how friends, family, media, society and culture can influence ideas about body image PD.5.INF.1	Identify medically-accurate information and resources about puberty and personal hygiene PD.5.AI.1			Explain ways to manage the physical and emotional changes associated with puberty PD.5.SM.1	
	Explain how the timing of puberty and adolescent development varies considerably and can still be healthy PD.5.CC.2	Identify parents or other trusted adults of whom students can ask questions about puberty and adolescent health issues PD.5.AI.2					
	Describe how puberty prepares human bodies for the potential to reproduce PAD.5.CC.3						
IDENTITY							
By the end of the 5 th grade, students should be able to:	Define sexual orientation as the romantic attraction of an individual to someone of the same gender or a different gender ID.5.CC.1	Identify parents or other trusted adults of whom students can ask questions about sexual orientation ID.5.AI.1				Demonstrate ways to treat others with dignity and respect ID.5.SM.1	Demonstrate ways students can work together to promote dignity and respect for all people ID.5.ADV.1

Core Concepts CC	Analyzing Influences INF	Accessing Information AI	Interpersonal Communication IC	Decision-Making DM	Goal Setting GS	Self-Management SM	Advocacy ADV
PREGNANCY AND REPRODUCTION							
By the end of the 5 th grade, students should be able to:	Describe the process of human reproduction PR.5.CC.1						
SEXUALLY TRANSMITTED DISEASES AND HIV							
By the end of the 5 th grade, students should be able to:	Define HIV and identify some age appropriate methods of transmission, as well as ways to prevent transmission SH.5.CC.1						
HEALTHY RELATIONSHIPS							
By the end of the 5 th grade, students should be able to:	Describe the characteristics of healthy relationships HR.5.CC.1	Identify parents and other trusted adults they can talk to about relationships HR.5.AI.1	Demonstrate positive ways to communicate differences of opinion while maintaining relationships HR.5.IC.1			Demonstrate ways to treat others with dignity and respect HR.5.SM.1	
PERSONAL SAFETY							
By the end of the 5 th grade, students should be able to:	Define teasing, harassment and bullying and explain why they are wrong PS.5.CC.1	Identify parents and other trusted adults they can tell if they are being teased, harassed or bullied PS.5.AI.1	Explain why people tease, harass or bully others PS.5.INF.1	Demonstrate ways to communicate about how one is being treated PS.5.IC.1		Discuss effective ways in which students could respond when they are or someone else is being teased, harassed or bullied PS.5.SM.1	Persuade others to take action when someone else is being teased, harassed or bullied PS.5.ADV.1
Define sexual harassment and sexual abuse PS.5.CC.2		Identify parents or other trusted adults they can tell if they are being sexually harassed or abused PS.5.AI.2	Demonstrate refusal skills (e.g. clear "no" statement, walk away, repeat refusal) PS.5.IC.2				

Appendix B

Survey Instrument

Perceptions of Parents of Grade School Children Regarding Sex Education

Directions: Please complete each item below related to your **oldest grade school (K-5)** child.
For this survey, "sexual health education" is defined as a k-12 instruction that builds knowledge and skills relating to human development, relationships, decision-making, abstinence, contraception, and disease prevention based on the student's developmental level. For the purpose of this study we used sex education to represent sexuality education. Do not put identifying marks on this survey. All responses will be private.

1. Please write the number of children you have using the table below to show their age and sex.

Children's sex	Children's age(s)													
	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Male														
Female														

2. Is age appropriate sex education taught in your **oldest grade school** child's school?

☐ Yes ☐ No ☐ Do not know

3. Do you think that age appropriate sex education topics should be taught in school?

☐ Yes ☐ No

If yes, at what grade level should students **begin** to be taught about sexual health?

☐ K-2 ☐ 3-5 ☐ 6-8 ☐ 9-12 ☐ Not at all

4. Please mark an [X] in the box which shows the grades you believe would be the best time to **begin** teaching the following concepts related to sex education at school.

Content Topics:	Grade Span				
	K-2	3-5	6-8	9-12	Not at all
Proper names for body parts (including male and female anatomy)					
Male and female reproductive system					
Gender roles (how society may expect boys and girls to act)					
Define sexual orientation					
Reproduction					
Puberty					
Pregnancy/human reproduction					
Different kinds of families					
Friendship					
Healthy relationships					
Bullying prevention					
Sexual abuse prevention					
HIV/STD prevention					
Pregnancy prevention					
Other please identify:					

5. Who do you think should make the final decision on what sex education topics should be taught in **grade schools**? (Check all that apply)

☐ Parents
 ☐ Religious leaders
☐ Health Teachers
 ☐ State Department of Education
☐ Teachers
 ☐ School boards
☐ School Administrators
 ☐ School district curriculum coordinator
☐ School Nurse
 ☐ Other: (please identify : _____)

6. Please mark an [X] in the box which shows the grades you believe would be the best time to begin teaching the following skills related to sex education.

Skills	K-2	3-5	6-8	9-12	Not at all
Analyze Influences (e.g., describe how friends, family, media, and culture influence how boys and girls should act, ideas about body image, and their relationships)					
Access Information (e.g., identify trusted adults they can talk to about puberty, female and male reproductive system, and/or sexual abuse)					
Communication Skills (e.g., demonstrate how to express feelings and how to respond to someone who is touching them in a way that makes them feel uncomfortable.)					
Self-Management (e.g., explain ways to manage the changes with puberty)					
Advocacy (e.g., work together with other students to promote respect for all people.)					

7. What do you think are the **challenges** to teaching sex education in **grade school**?

(Check all that apply)

☐ There are no challenges
☐ Not enough class time
☐ Some parents do not want it taught in the school
☐ School administrators do not want it taught
☐ School policy does not allow it to be taught at the elementary level
☐ Sex education is not a subject on standardized tests
☐ Teachers are not at ease teaching it
☐ It will make children more likely to want to have sex
☐ Other: (please identify : _____)

8. What do you think would be the **benefits** of having sex education taught in your oldest child's **grade school**? (Check all that apply)

☐ There are no benefits
☐ Students will learn about their own bodies
☐ Students will be prepared to make informed healthy decisions
☐ Students will be more at ease talking to their parents about sexual issues.
☐ Students will learn how to prevent or respond to sexual abuse
☐ Students may delay when they have sex
☐ Students will learn how to prevent sexually transmitted diseases
☐ Students will learn how to prevent getting pregnant
☐ Other: (please identify : _____)

9. Please mark an [X] in the space of the age you discussed or plan to discuss any of the following topics with your **oldest grade school child at home**.

Content Topics:	K-2	3-5	6-8	9-12	Would not teach it at home.
Proper names for body parts (including male and female anatomy)					
Male and female reproductive system					
Gender roles (how society may expect boys and girls to act)					
Define sexual orientation					
Reproduction					
Puberty					
Pregnancy/human reproduction					
Different kinds of families					
Friendship					
Healthy relationships					
Bullying prevention					
Sexual abuse prevention					
HIV/STD prevention					
Pregnancy prevention					
Other please identify:					

10. How do you think you have done in talking with your **oldest grade school child** about sexual health issues?
 _____Excellent _____Good _____Fair _____Poor _____I have not spoken to my child about sexual health.

11. When have you provided sexual information to your **oldest grade school child**?

(Check all that apply)

- _____ I have not spoken to my child about sexual issues
 _____ When my child asks me questions
 _____ When a sexual health topic was discussed at school
 _____ When a family/local event occurred (e.g. a cousin became pregnant)
 _____ When media TV shows or songs related to sexual health open the door to talk.
 _____ I have planned times that I talk to my child about sexual issues
 _____ Other: (please identify : _____)

12. How much does each of the statements below describe your **oldest grade school child**?

My child...	Strongly Agree	Agree	Disagree	Strongly Disagree
likes to explore strange places.				
likes to do frightening things.				
prefers friends who are exciting and unpredictable.				
likes new and exciting experiences, even if they have to break the rules.				

Background Information

Directions: Please read each statement and mark an [X] in the space provided.

1. What is your sex? ☐ Male ☐ Female
2. What is your age? _____ years
3. What is your race/ethnicity?
☐ Asian
☐ Black
☐ Hispanic
☐ White
☐ Other: _____
4. Your highest grade or level of education:
☐ Some high school
☐ High school graduate/GED
☐ Some college
☐ College graduate
☐ Post graduate education
5. Household income:
☐ \$24,999 or less
☐ \$25,000- \$49,999
☐ \$50,000-\$89,999
☐ \$90,000 or more
6. What type of school does your child attend?
☐ Public
☐ Private
☐ Home School
☐ Other: _____
7. Where do you live?
☐ Rural
☐ Suburban
☐ Urban
8. What is your political party?
☐ Democrat
☐ Republican
☐ Independent
☐ Libertarian
☐ Not sure
9. What is your religious preference?
☐ Catholic
☐ Jewish
☐ Muslim
☐ Protestant
☐ Not religious
☐ Other: _____
10. How often does your child attend religious services?
☐ Rarely/Never
☐ Few times a year
☐ 1-3 times a month
☐ Once a week
☐ More than once a week
11. How would you describe your family structure?
☐ Both birth parents present
☐ Extended Family
☐ Single Parent
☐ Birth parent and step-parent
☐ Other: _____

Thank you for taking this survey!

Appendix C

Panel of Experts

Content Experts

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Appendix D

Human Subjects Approval letter

The University of Toledo
Department for Human Research Protections
Social, Behavioral & Educational Institutional Review Board
Office of Research, Rm. 2300, University Hall
2801 West Bancroft Street, Mail Stop 944
Toledo, Ohio 43606-3390
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(FWA00010686)

To: Susan K. Telljohann, Ph.D. and Christine M Baksoovich
Department of Health and Recreation Professions

From: Barbara K. Chesney, Ph.D., Chair
Mary Ellen Edwards, Ph.D., Vice Chair
Walter Edinger, Ph.D., Chair Designee

Signed: Mary Ellen Edwards **Date:** 04/17/13

Subject: IRB #108283
Protocol Title: *Elementary School Parents Perceptions Regarding School Sexuality Education Topics*

On 04/17/13, the Protocol listed below was reviewed and approved by the Chair and Vice Chair of the University of Toledo (UT) **Social Behavioral & Educational** Institutional Review Board (IRB) via the expedited process. The Chair and Vice Chair noted that a waiver of written consent has been granted. This action will be reported to the committee at its next scheduled meeting.

Items Reviewed:

- IRB Application Requesting Expedited Review
- Waiver of Written Consent
- Recruitment Letter – Information Sheet (version date 04/17/13)
- Survey(s) (version date 04/17/13)

This protocol approval is in effect until the expiration date listed below, unless the IRB notifies you otherwise.

Only the most recent IRB approved Consent/Assent form(s) listed above may be used when enrolling participants into this research.

Approval Date: 04/17/13	Expiration Date: 04/16/14
--------------------------------	----------------------------------

Number of Subjects Approved: 3,000

Please read the following attachment detailing Principal Investigator responsibilities.